19970605.qrp qrp-por0.747
>From owner-qrp-l@Lehigh.EDU Wed Jun 4 18:03:57 1997
>Return-Path: <owner-qrp-l@Lehigh.EDU>
>Received: from sco.theporch.com (sco.theporch.com [207.234.31.38])
>   by uro.theporch.com (8.8.6.Beta4/A-UX3.1.1) with ESMTP id SAA14513
>   for <shimshon@uro.theporch.com>; Wed, 4 Jun 1997 18:03:55 -0500 (CDT)
>Received: from fidoii.CC.lehigh.EDU (fidoii.CC.lehigh.EDU [128.180.1.4])
>   by sco.theporch.com (8.8.6.Beta4/SCO-5.0.2) with ESMTP id XAA12298
>   for <shimshon@theporch.com>; Wed, 4 Jun 1997 23:03:45 GMT
>Received: from Lehigh.EDU ([127.0.0.1]) by fidoii.cc.Lehigh.EDU with SMTP id
<34977-18136>; Wed, 4 Jun 1997 19:03:22 -0400
>Date: Wed, 4 Jun 1997 19:03:08 EDT
>Sender: owner-qrp-l@Lehigh.EDU
>Precedence: bulk
>From: qrp-l@Lehigh.EDU
>To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
>Subject: QRP-L digest 747
>Mime-Version: 1.0
>Content-Type: text/plain; charset=us-ascii
>X-Listprocessor-Version: 8.1 beta -- ListProcessor(tm) by CREN
>Message-Id: <97Jun4.190322edt.34977-18136+183@fidoii.cc.Lehigh.EDU>
>Status: O

QRP-L Digest 747

Topics covered in this issue include:

  1) [20756] Lightning Protection Article
     by "'AB7HI' Stephen Lee" <slee@u.washington.edu>
  2) [20757] Build Intelligent Xcvr Book
     by Roger Pease <Roger.Pease@Eng.Sun.COM>
  3) [20758] RE: CW Bandwidth (the analysis continues)
     by "Heron, George" <G.Heron@dialogic.com>
  4) [20759] W6MMA SLV Coil question
     by Kory Hamzeh <kory@avatar.com>
  5) [20760] Re: CW Bandwidth (the analysis continues)
     by Ed Loranger <we6w@qsl.net>
  6) [20761] Re: QRP Generators/Solar Power
     by Joe Gervais <vole@primenet.com>
  7) [20762] Re: QRP-L Hints and Kinks
     by DYARNES@aol.com
  8) [20763] Re: QRP Generators/Solar Power
     by Kory Hamzeh <kory@avatar.com>
  9) [20764] RE: CW Bandwidth (the analysis continues)
     by "Robert P. Okas" <vintage@best.com>
 10) [20765] New address for SMD parts
     by Mike Czuhajewski <wa8mcq@u1.abs.net>
 11) [20766] Itty Bitty Station Light, sketch on the web

    by RobCap@aol.com
12) [20767] Weather confusion
    by "Dean Marzocca" <n2tnn@ifu.net>
13) [20768] Book - Build Your Own Intelligent Amateur Radio Transceiver
    by "Craig B. Johnson" <johns516@maroon.tc.umn.edu>
14) [20769] Re: Cabelas - SLV
    by Dana E Hager <dehager@ix.netcom.com>
15) [20770] M100 logger
    by "Robert D. Haslach" <rhaslach@CapAccess.org>
16) [20771] MI-QRP T5W
    by ah231@detroit.freenet.org (Bernard F. Gaffney Jr.)
17) [20772] Custom 38 Special Enclosures
    by Jerry Parker <jparker@fix.net>
18) [20773] Re: W6MMA SLV Coil question
    by "Jim (AL7FS) and Nancy (KL7NY) Larsen" <larsennc@alaska.net>
19) [20774] FDIWM (Four Days In the White Mountains) LONG
    by gsurrency@juno.com (Gary L Surrency)
20) [20775] Re: Custom 38 Special Enclosures
    by mdwatt@usit.net (Marty Watt)
21) [20776] Re: Short Wave Receiver
    by k3lu@juno.com (Ulis R. Fleming)
22) [20777] 50/40/30 Activity
    by Kr0i1@aol.com
23) [20778] Re: Dan's Small Parts
    by Raventhorne <jelder@ix.netcom.com>
24) [20779] Re: Friedricshaven
    by David.Reid@asml.nl (David Reid)
25) [20780] G-QRP club web pages
    by Tony Fishpool <G4WIF@compuserve.com>
26) [20781] Re: GM30-DX
    by "Len Touth - PRIO Corp. - Ohio" <len@infinet.com>
27) [20782] RE: CW Bandwidth (the analysis continues)
    by adams@chuck.dallas.sgi.com (Chuck Adams)
28) [20783] Field Day
    by Richard Powell <ripowell@mpna.com>
29) [20784] Antennas and Transmission Lines
    by adams@chuck.dallas.sgi.com (Chuck Adams)
30) [20785] Trees and conductivity
    by Scott Rosenfeld NF3I <ham@w3eax.umd.edu>
31) [20786] FS: Centennial Kit
    by n4js@amsat.org
32) [20787] Distress call on 500 kHz
    by rerobins@unccvm.uncc.edu (Rick Robinson)
33) [20788] /P Computer Operations
    by "Mark S. Adams" <msadams@acsu.buffalo.edu>
34) [20789] HAMCOM '97 Arlington Texas
    by "Joe Spencer" <joes@tcjc.cc.tx.us>
35) [20790] RE: VHF with NE602As

by sarraf@thermacore.com
36) [20791] CORA - Field Day?
by Jay & Jackie <jayboy@psnw.com>
37) [20792] Re: Fishing Pole for SLV
by jeverhar@camden.lmco.com
38) [20793] re:VHF with NE602As
by Brian Cieslak <brianc@ams-i.com>
39) [20794] RX on a Chip
by Clark Fishman <cfishman@pica.army.mil>
40) [20795] re:FD Logging Program
by Brian Cieslak <brianc@ams-i.com>
41) [20796] Re: Hunting Wiley Foxii
by Randy Hargenrader <randyh@harksystems.com>
42) [20797] FS: MFJ 949E, Kantronics KAM+
by Roger Hightower <n7kt@dancris.com>
43) [20798] Communication Quarterly Articles?
by rhiller@sysdev.com (Rick Hiller)
44) [20799] Centennial Kit Sold!
by jsielke@pobox.com
45) [20800] Slow CW today 6/4/97 28.170 from 1400 UTC
by N2QCE@aol.com
46) [20801] RE: QRP-L Hints and Kinks
by Larry East <w1hue@amsat.org>
47) [20802] FDIM Building Contest - Where's the Pictures?
by rayj@starbase.net (Ray Johnston)
48) [20803] 38S xtal mod
by Steve Miller <kg7pv@teleport.com>
49) [20804] Computer and rig on same battery
by AA0QX <AA0QX@prodigy.net>
50) [20805] 50/40/30 schedule
by "Michael A. Gipe" <mgipe@reliablemeters.com>
51) [20806] QRP Clubs & FD 97' (Read Pse)
by Bill Todd <bill@techline.com>
52) [20807] Re: Fishing Pole for SLV
by fmathews@norfolk.infi.net (Frank Matthews)
53) [20808] HB: Re: RX on a Chip
by torell@sicom.com (Kent Torell)
54) [20809] Wayne Smith, K8FF email address??
by Doug Hendricks <ki6ds@dpol.k12.ca.us>
55) [20810] LOOKING FOR W5ACM...
by "GREG " <KB2QQM@msn.com>
56) [20811] Re: Antennas and Transmission Lines
by Ken Lopez <kjlopez@earthlink.net>
57) [20812] ARS Demise
by Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
58) [20813] 24 hr clock
by Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
59) [20814] CQ W1LP

    by "J. Skalski" <jskalski@acsu.buffalo.edu>
 60) [20815] Re: CQ W1LP
    by "J. Skalski" <jskalski@acsu.buffalo.edu>
 61) [20816] Centennial SOLD!
    by n4js@amsat.org
 62) [20817] GQRP address
    by Stephen Gibson <SWGibson@worldnet.att.net>
 63) [20818] For Sale: New/In-Box   WM-20 20M SSB QRP kit
    by "Howie Weinstein" <k3hw@hotmail.com>
 64) [20819] Re: 24 hr clock
    by Brad Mitchell <bmitchel@kodak.com>
 65) [20820] TopBand: RE: Small 24 Hour clocks (fwd)
    by george fremin iii <geoiii@bga.com>
 66) [20821] ARRL SS Contest Sponsor
    by George Gingell <k3tks@u1.abs.net>
 67) [20822] Re: Oscillator design
    by Zack Lau <zlau@arrl.org>
 68) [20823] Re: Small 24 Hour clocks (fwd)
    by rob3ert@juno.com (Robert G. Parks)
 69) [20824] FS/FT: Yaesu FT-707
    by wb2vuo@juno.com (William K Hibbert)
 70) [20825] Re: CW Bandwidth (the analysis continues)
    by gsurrency@juno.com (Gary L Surrency)
 71) [20826] Re: 24-hour Clock
    by wb2vuo@juno.com (William K Hibbert)
 72) [20827] 24 hr clocks so far
    by Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
 73) [20828] 24 hour clocks/with back-up
    by wj5o@juno.com
 74) [20829] Re: CW Bandwidth (the analysis continues)
    by N4JS <jsielke@pobox.com>
 75) [20830] Looking at CW
    by N4JS <jsielke@pobox.com>
 76) [20831] NNY hamfest
    by Richard Sherman <srichard@aldus.northnet.org>
 77) [20832] FS: Unassembled 38S
    by wb2vuo@juno.com (William K Hibbert)

Date: Tue, 3 Jun 1997 16:09:11 -0700 (PDT)
From: "'AB7HI' Stephen Lee" <slee@u.washington.edu>
To: qrp-l@Lehigh.EDU
Subject: [20756] Lightning Protection Article
Message-ID: <Pine.A41.3.95b.970603155941.100748A-100000@homer15.u.washington.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

In the May/June 1997 issue of "Wooden Boat" magazine is
an article about protecting against lightning on board a
boat. Thought I would post it here since "Wooden Boat"
magazine usually lies outside the scope of amateur radio.
I spotted it in the library last evening but didn't get
the opportunity to read it in depth. I do plan to acquire
a copy myself since the subject matter is very pertinent to
amateur radio. Enjoy!

Stephen Lee, AB7HI, Tacoma, WA
slee@u.washington.edu

Date: Tue, 3 Jun 1997 16:32:00 -0700 (PDT)
From: Roger Pease <Roger.Pease@Eng.Sun.COM>
To: qrp-l@Lehigh.EDU
Subject: [20757] Build Intelligent Xcvr Book
Message-ID: <libSDtMail.9706031632.26631.pease@immigrant>
MIME-Version: 1.0
Content-Type: TEXT/plain; charset=us-ascii
Content-MD5: GyrUM/qJtd4ZI4Wr509yNA==

Was cruising a local bookstore today and I happened across
a book:

> Build Your Own Intelligent Amateur Radio Tranceiver
> Randy L. Henderson
> TAB/McGraw-Hill Books
> Copyright 1997
> (forget to get the ISBN)

Being a dedicated lurker (mostly) here I have not noticed any
mention of it. It guides you through building a synthesized
multi-band CW/SSB rig from scratch. Got foil patterns for the
boards and everything. I only took a quick look (lunch hour)
but it looked like the autor went to some trouble to use
accessible parts. About $30.

Anybody seen this book? Coments?

> _Roger KE6PPI

Date: Tue, 3 Jun 1997 19:34:35 -0400
From: "Heron, George" <G.Heron@dialogic.com>
To: "'Low Power Amateur Radio Discussion'" <qrp-l@Lehigh.EDU>,
"'mgemm@mtechnologies.com'" <mgemm@mtechnologies.com>, "'n4so@juno.com'"
<n4so@juno.com>
Subject: [20758] RE: CW Bandwidth (the analysis continues)
Message-ID:
<c=US%a=_%p=Dialogic%l=EXCHANGE1NJ-970603233435Z-27380@exchange1nj.dialogic.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit

I'd like to respond to my own comment from yesterday! Not sure anyone is following this topic any longer ... but if you are, here's more technical background. (Again I'm no expert and would bow to corrections ... I just like to understand the physics of what's happening.)

N4SO sent me a private email quoting from QST (March '97 pg 41) stating that "the keying envelope rise time, not keying speed, determines bandwidth."

This intrigued me further to understand the math involved, beyond what I stated yesterday (also in this email). Although I now accept the details in QST (thanks for the pointer, Ken), I still argue that the keying speed *does* contribute to bandwidth consumed.

First consider the rise/fall time contribution. The "softer" you make the edges, the less energy is contained in the harmonics going out in positive and negative directions from the fundamental. The frequency placement of those harmonics stay the same, depending on the keying rate, but the energy content of that decaying envelope diminishes dramatically faster with soft edges in the modulating square wave.

Stated empirically, you are forcing the square wave to be more sinusoidal in hardware (via caps & resistors), thus providing less of a need for the harmonics contribution to the fundamental sinusoid forming the square wave. (Sounds confusing, but see previous email below that mentions how increasing harmonics contribute to construct sharper edges of the square wave.)

That's the obvious part of bandwidth contribution, as re-inforced by the QST article.

The part where I still take exception is in contending that bandwidth is also contributed by higher keying speeds.

First, to be clearer than yesterday, it's not a low frequency square wave that's creating our transmitted CW signal. It's actually that square wave (i.e., idealized series of "dits") that's modulating a 7MHz pure sine wave signal (a 40m example transmission).

In the frequency domain (i.e., taking a Fourier Transform of this) the result of "convolving" the LOW frequency square wave with the HIGH frequency pure sinusoid yields a sinc function with side lobes corresponding to the energy contributions comprising the bandwidth consumed. And the distance of the minor lobes from the center frequency is most definitely, and mathematically, related to the frequency of the modulating square wave. It's just that the magnitude of this variation in frequency is very small compared to the fundamental sinusoid frequency, perhaps considered by some to be negligible.

Now *empirically* speaking, and I'm still unable to dig up references, I recall that when operating close to the band edge it was much better to send slowly, thus keeping your bandwidth within the amateur band. Taken to extreme, sending one "dit" would seem to have less energy distribution as compared to a 60 wpm string of dits, for which you would have to be farther away from the edge to ensure legal operation.

One could measure this, I suppose, with a separate receiver and subjective audio measurements through the normal CW filter being used. Send a 1 wpm string of dits and move the receiver frequency away from the transmitting frequency so as to barely hear the tone. Next, fling the keyer speed control up to 60 wpm and compare the tone heard at the same spot on the receiver dial. You should hear more "energy", indicating that a greater bandwidth is being used at the higher keying rate.

Okay, that's it. I may be all wet, but it's been fun thinking through this to try to understand it better. Hope I'm not treading on any sacred ground and I'm open for corrections and education along the way.

Thanks for the bandwidth <smile>.

73,
--George N2APB
g.heron@dialogic.com

>==========
>Marshall -
>
>Coming at this from a different perspective, it really is the frequency of
>the CW "square" wave that determines the ultimate bandwidth used. The
>transients are close to being the same with fast keying as compared to slow

>keying, but it's truly the frequency of keying that determines the overall
>bandwidth consumed in the transmission.
>
>I'm not a PhD expert or anything, but consider this:
>
>1) For a given CW signal (e.g., a continuous string of "dits") of frequency
>F, there will be energy going out infinitely in positive (and negative)
>directions at odd multiples of the base frequency F, contained within a
>decaying envelope.
>
>2) At some point, a "real" system (like the hardware and filters in our rigs)
>filter the sprectrum to cut it off and limit the tails of that energy spread.
> Let's say that the filtering happens at a level of -100dB (I don't know,
>some arbitrary verrrry low level).
>
>3) The resultant bandwidth of energy you are transmitting into the ether
>therefore is that spread defined by the outer limit at that -100dB cutoff
>point.
>(And BTW, those decaying frequencies we just cut off to limit bandwidth
>*were* used to complete the approximation of the square wave, and by
>eliminating them we produce ringing on the edges of the transmitted signal
>... called the Gibb Effect, or something, and we hams call this clicks and
>transients.)
>
>4) Now, here's the crux of the point: If you INCREASE the frequency of your
>string of "dits" to F+n, the spectrum defining that square wave moves out
>accordingly -- same shape of the energy envelope, but just wider. And since
>the filtering done by our rigs continues to be done at -100dB (or whatever),
>the bandwidth defined by that transmission frequency F+n is likewise larger.
>
>5) If you DECREASE the frequency of your "dit" string to F-n, the spectrum is
>likewise smaller, the -100dB cutoff points are closer in, resulting in less
>BW consumed.
>
>Hope I didn't needlessly confuse the matter, but I found the discussion
>interesting. Hope it helps.
>
>--George N2APB
>g.heron@dialogic.com
>http://www.njqrp.org
>
>==========================
>Marshall wrote ...
>"I've got some more responses to go over, but so far I still don't
>understand how the bandwidth can be affected by the keying rate.
>Surely the clicks and transients must be identical (resulting in
>specific if not literally measurable bandwidth) regardless of the
>rate?   "

>

Date: Tue, 3 Jun 1997 17:06:22 -0700 (PDT)
From: Kory Hamzeh <kory@avatar.com>
To: qrp-l@Lehigh.EDU
Subject: [20759] W6MMA SLV Coil question
Message-ID: <Pine.BSI.3.91.970603165312.2075A-100000@avatar.avatar.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi All,

I bought an SLV coil kit from W6MMA. Vern uses foam that is glued inside the coil to cause enough friction to keep the coil in place on the SD-20. I keep tearing up the foam and I'm kind of tired of glueing it back. I was going to use a 1 inch hose screw clamp (the type with a worm screw on the side) to clamp on the SD-20. Then slide in coil over the SD-20 to use the clamp as a stop to keep the coil up and in positions.

Why am I telling everyone on this list about this? Well, because the clamp is metal and I am concerned it might effect the performance of the coil or the antenna. Does anyone have any feeling about this?

Thanks a million!

Kory

Date: Tue, 03 Jun 1997 17:29:02 -0700
From: Ed Loranger <we6w@qsl.net>
To: G.Heron@dialogic.com
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [20760] Re: CW Bandwidth (the analysis continues)
Message-ID: <3394B6CE.761D@qsl.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Yes, I know I'm still following this...

Went home yesterday and did a lot of listening to the

cw ops on the radio (Where else :^))

Without the math and multi-letter background, I hesitate to
contribute my findings. but since you,
--George N2APB
g.heron@dialogic.com
eased your stance, I feel a little more comfortable with
my humble analysis.

What I did: Using the variable bandwith filter adjustment
on my OHR-100 rig, I tuned in many stations and QSY'd away
from zerobeat obtaining a rough idea how wide the signal was.
I then listened to the qso's and guessed the sending speed and
recorded any xmt power sent. I did this for about 5 hours.

(Sidetracked by some 30 WPM W1AW code practice and a sprint
qso)

Findings: QRO or QRP, QRS or QRQ, didn't matter. The wide
bandwidth splatter +/- 5 kc's was always with stations
having hard keying -- Key clicks and what appeared to be
non-sinusoidal keyed waveforms. (No, I didn't scope these)
Just my audio perception.

I found it harder to copy qrp stations with 'rounded' keying.
The keyed tone was much smoother and without key clicks.
Bandwidth on these stations was very sharp and more difficult
to find amidst the pileup. (i.e. more narrowband).

Gotta go fer now... This all MHO.
-Ed Loranger
to peak
72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)
HW-8;OHR-100, Pixie2, Johnson Viking II w/VFO.
QRP-L#1068/Norcal#???/ARCI#????
mailto:we6w@qsl.net http://www.qsl.net/we6w

Date: Tue, 3 Jun 1997 17:31:36 -0700 (MST)
From: Joe Gervais <vole@primenet.com>
To: qrp-l@Lehigh.EDU
Subject: [20761] Re: QRP Generators/Solar Power
Message-ID: <199706040031.RAA28778@usr06.primenet.com>

Glenn (AE0Q) wrote:

>
> We also have a 4-amp solar panel connected to help float the battery running
> the radio when the sun is up. No generator needed for ANYthing! Nice quiet
> site and TRUE battery operation (generators at a QRP Field Day site, Al??)..

Perhaps it was a hamster running on a little treadmill? :-)

Speaking of QRP/Solar/Battery operating, does anyone have
experience using a solar panel to recharge batteries while
backpacking, bike touring, etc?

I need a solar panel that meets the following specs:

- Small, rugged, lightweight (for backpacking).

- Can recharge a 2-3 AHr battery in less than one day.

- "Clean" connection between panel, regulator and battery.
   (i.e. no stray wires, fragile connections, etc.)

Those flexible panels seem nice, but I hear they start losing
efficiency in 3 or so years. On the other hand, they appear to
win in the weight/ruggedness categories.

Thanks for your help! My Sierra and I will be forever in
your debt. :-)

Cheers de AB7TT,

-Joe, vole@primenet.com, AZ ScQRPions (Phoenix)

"And then you must cut down the mightiest tree in the
 forest with... A HERRING!"

Date: Tue, 3 Jun 1997 20:36:20 -0400 (EDT)
From: DYARNES@aol.com
To: prvalko@oakland.edu, qrp-l@Lehigh.EDU
Subject: [20762] Re: QRP-L Hints and Kinks
Message-ID: <970603203517_440150382@emout19.mail.aol.com>

In a message dated 97-06-03 11:14:57 EDT, prvalko@Oakland.edu (Paul R. Valko)
writes:

<< Perhaps it may be a real good idea to offer equipment for sale to QRP-L
 but hold all offers for 24 hours and draw one out of a hat? >>

Seems like a very fair way to do it. Especially fair to those of us who
can't monitor QRP-L minute by minute.

72 de David W7AQK

Date: Tue, 3 Jun 1997 18:07:55 -0700 (PDT)
From: Kory Hamzeh <kory@avatar.com>
To: Joe Gervais <vole@primenet.com>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [20763] Re: QRP Generators/Solar Power
Message-ID: <Pine.BSI.3.91.970603180643.2481A-100000@avatar.avatar.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Tue, 3 Jun 1997, Joe Gervais wrote:
>
> Speaking of QRP/Solar/Battery operating, does anyone have
> experience using a solar panel to recharge batteries while
> backpacking, bike touring, etc?
>

Antenna's West sells a 10 watt panel. It is about the size of a magazine
open. Puts out 20 volts at 600ma and it very rugged. Used by the army in
desert storm.

Kory

Date: Tue, 3 Jun 1997 18:07:26 -0700 (PDT)
From: "Robert P. Okas" <vintage@best.com>
To: "Heron, George" <G.Heron@dialogic.com>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [20764] RE: CW Bandwidth (the analysis continues)
Message-ID: <Pine.SGI.3.95.970603173825.3871A-100000@shellx.best.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Tue, 3 Jun 1997, Heron, George wrote:

> I'd like to respond to my own comment from yesterday! Not sure anyone
> is following this topic any longer ... but if you are, here's more
> technical background. (Again I'm no expert and would bow to corrections
> ... I just like to understand the physics of what's happening.)
>
> N4SO sent me a private email quoting from QST (March '97 pg 41) stating
> that "the keying envelope rise time, not keying speed, determines
> bandwidth."

Well folks, it's really both. Let me try to clear things up...

Consider a 7001 KHz *pure* sine wave being keyed by a *perfect* 10 Hz square wave (50% duty cycle). For the non-EE types, multiplication of two signals in the time-domain results in convolution in the frequency domain. The carrier energy is represented (ideally) as a Dirac delta function in the frequency domain, centered on 7,001,000 Hz. The square wave power spectrum has a (sin(x)/x)^2 envelope shape, and, since it's a perfect square wave with zero switching times, the ripples go on forever. The first zero crossings of the envelope function occur at 0 Hz and 10Hz. Subsequent zero crossings occur at multiples of 10 Hz. The harmonic peaks decay in amplitude.

In this example, convolution is easy: The sinc^2 waveform is frequency shifted up to a center frequency of 7,001,010 Hz. The first zero crossings occur at 7,001,000Hz and 7,001,020Hz. Keying faster increases the frequency spread from the enter frequency to the first pair of zero crossings. Since the keying waveform is perfectly square, the modulated envelop theoretically goes on forever.

Now, a filter can be designed to soften up the edges of the square wave so that the keying waveform's spectrum hits the first zero crossing and then disappears. It's done all the time in satellite comms. So, in this case, only keying speed determines occupied bandwidth.

My $2.0e-02,

Bob - W3CD

Date: Tue, 3 Jun 1997 21:25:16 -0400 (EDT)
From: Mike Czuhajewski <wa8mcq@u1.abs.net>
To: Daniel C Winkler <dwink@juno.com>

Cc: qrp forum <qrp-l@Lehigh.EDU>
Subject: [20765] New address for SMD parts
Message-ID: <Pine.BSI.3.93.970603211709.12296B-100000@u1.abs.net>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Dan, you asked for the e-mail address of "baggybob", the guy with the SMD parts at Dayton, who also sells by mail. I dropped a wad of money with him again at Dayton, but STILL have not started building my SMD rig :-)

He was handing out slips of paper at Dayton with his new e-mail address:

baggybob@elknet.net

BTW, in addition to lots of SMD parts--now including a FET, the U310, I think--he also has some interesting leaded parts, which include a cute, tiny 25K Allen-Bradley pot. I haven't had any updates on his listing since the last time I announced it on qrp-l.

As for the SMD QRP rig which I still haven't built, people have already built rigs (using SMDs) into two of our packages--a 9 volt battery case (WA6AHL, pictures on the qrp-l web page of Steve Hideg) and the tiny metal tray that 5 cartridge fuses come in. Bill Kelsey, N8ET, brought that one to Dayton this year to show; it was built by WB8PBR, I think it was, and I believe Steve H got a picture which will eventually show up on the web page. And that was a transceiver, a Pixie for 80M. Really cute, and lots of wasted volume, believe it or not.

73 and Queue Our Pea DE WA8MCQ wa8mcq@abs.net

Date: Tue, 3 Jun 1997 21:36:52 -0400 (EDT)
From: RobCap@aol.com
To: qrp-l@Lehigh.EDU
Cc: mvines@pacbell.net
Subject: [20766] Itty Bitty Station Light, sketch on the web
Message-ID: <970603213634_-495346145@emout17.mail.aol.com>

Thanks for the nice letters from all of you guys who have visited my kit building web site. I've really enjoyed hearing the feedback, and have incorporated many of your suggestions.

A few of you asked for me to post the sketch of the "Itty Bitty Station Light". The sketch is now posted to the Internet. You can find the sketch

by going to the main web site, selecting the "Itty Bitty Station Light" article, then selecting "Figure 1".

The site also has photos of an HW-8 in kit form, as well as a number of other kit photos and resources.

http://members.aol.com/w3dx/index.html

73,

Rob, W3DX

Date: Tue, 3 Jun 1997 21:39:00 -0400
From: "Dean Marzocca" <n2tnn@ifu.net>
To: "QRP-L" <qrp-l@Lehigh.EDU>
Subject: [20767] Weather confusion
Message-ID: <199706040139.VAA10426@mail.ifu.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Did anyone check the national weather map today? Montana, 80 F and here in NJ it was 55 F. I had on a sweatshirt and a lined windbreaker jacket while working outside today. My fingers were stiff from the cold and a strong hot cup of coffe sure tasted good.

What is going on??? Gota check my tomatoes tonight

OBQRP:: NJ is one of the smallest states (and coldest) but looks like a pin cushion from space with all our SLV verticals. Too bad you can't see the RF flowing out of them, might look like Niagra Falls going backwards....(qrp of course)
72/73 Dean N2TNN NJ
n2tnn@ifu.net

Date: Tue, 3 Jun 1997 20:46:17 -0500
From: "Craig B. Johnson" <johns516@maroon.tc.umn.edu>
To: <qrp-l@Lehigh.EDU>
Subject: [20768] Book - Build Your Own Intelligent Amateur Radio Transceiver
Message-ID: <3394c9eb32d9374@mhub1.tc.umn.edu>
MIME-Version: 1.0

Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

If you are interested in building a fairly state-of-the-art amateur radio transceiver, you may be interested in a new book that I just came across. It is called "Build Your Own Intelligent Amateur Radio Transceiver", by Randy Henderson (1997, McGraw-Hill, $29.95).

This book covers a lot of design issues and describes the theory behind them. He describes RF front ends, audio back ends, low and high IF stage design, crystal filters, oscillators, optical shaft encoders, frequency counters, etc. He spends a lot of time explaining different frequency generation techniques. The book eventually leads up to building a complete frequency synthesized rig, controlled by an 80C31 microprocessor. (A listing of the source code is included.)

This book also shows how to build a variety of test equipment, such as a spectrum analyzer and a swept-frequency generator for crystal-filter evaluation.

Even if you don't want to build this rig exactly as described, I think it can be used as a springboard for a lot of interesting homebrew projects.

I am really enjoying the book, and I hope some of you will find it interesting too.

- Craig,   AA0ZZ

Date: Tue, 03 Jun 1997 21:22:22 -0700
From: Dana E Hager <dehager@ix.netcom.com>
To: qrp-l@Lehigh.EDU
Subject: [20769] Re: Cabelas - SLV
Message-ID: <3394ED7E.3029@ix.netcom.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

The address is :

http://www.cabelas.com/

They can also be reached at 1 800 237-4444

Dana E Hager
Nazareth, PA

Date: Tue, 3 Jun 1997 22:24:13 -0400 (EDT)
From: "Robert D. Haslach" <rhaslach@CapAccess.org>
To: qrp-l@Lehigh.EDU
Subject: [20770] M100 logger
Message-ID: <Pine.SUN.3.91-FP.970603222142.21301C-100000@cap1.capaccess.org>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Saw the posting on the M100 logging program - which I have on one of my Model T's, and have used on 2MFM via the the audio & mike jacks. Does anyone remember for me where the output exits the Model T when using MORSE. BA and any suggestions on how I could feed it via the KEY input on my ARK 40?
PS - I could make one Model T available to the right home. I'm keeping one.

Regards, N3FRT
Robert D. Haslach
Bye

Date: Tue, 3 Jun 1997 22:31:55 -0400
From: ah231@detroit.freenet.org (Bernard F. Gaffney Jr.)
To: qrp-l@Lehigh.EDU
Subject: [20771] MI-QRP T5W
Message-ID: <199706040231.WAA28036@detroit.freenet.org>

Any MI-QRPers out there who know what's happenned to T5W please email me directly. I've not received a copy since Dec 1996's issue. I've queried the club officers again. I understand the editor may be pressed with his business, and it's voluntary and all. Still, it seems T5W may be defunct.

72/73 de N8PVZ

--

       We are QRP | Bernard F. Gaffney, Jr. N8PVZ
  Resistance is futile | MI-QRP# M-1152
You will be assimilated | ah231@detroit.freenet.org

Date: Tue, 03 Jun 1997 20:09:06 -0700
From: Jerry Parker <jparker@fix.net>
To: qrp-l@Lehigh.EDU
Subject: [20772] Custom 38 Special Enclosures
Message-ID: <2.2.32.19970604030906.00af5398@fix.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

OK,

Doug Hauff KE6RIE has finally done it.

You've seen his Custom Enclosures for the 38 Special

on last months NorCal Meeting Report.

Doug is now making these great enclosures available to everyone.

Check them out at his web site:

http://www.fix.net/~slmachco

Date: Tue, 03 Jun 1997 19:05:52 -0800
From: "Jim (AL7FS) and Nancy (KL7NY) Larsen" <larsennc@alaska.net>
To: kory@avatar.com
Cc: qrp-l@Lehigh.EDU
Subject: [20773] Re: W6MMA SLV Coil question

Message-ID: <3394DB90.734D@alaska.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Kory Hamzeh wrote:

>
> I bought an SLV coil kit from W6MMA. Vern uses foam that is glued inside
> the coil to cause enough friction to keep the coil in place on the SD-20.
> I keep tearing up the foam and I'm kind of tired of glueing it back. I
> was going to use a 1 inch hose screw clamp (the type with a worm screw on
> the side) to clamp on the SD-20.
> Kory

I have the black widow. I just decided where I wanted the coil and then spiral wrapped with black electrician's tape. Taper the wrapping. You don't need too many wraps and the whole pole still sides together for travel. Works great. (at least on the Black Widow.)

73,
Jim
--
Jim Larsen
Acupressure Anchorage
AL7FS   ex-WA0LPK / KL7
Anchorage, Alaska

Date: Tue, 3 Jun 1997 21:11:19 -0700
From: gsurrency@juno.com (Gary L Surrency)
To: qrp-l@Lehigh.EDU
Subject: [20774] FDIWM (Four Days In the White Mountains) LONG
Message-ID: <19970603.211121.9862.3.gsurrency@juno.com>

Well, I had a blast up in the cool air of the White Mountains of Eastern AZ from Friday to Monday. I didn't get to work any QRP-L members, but I did possibly recruit some new members in the process.

The location is in East, central Arizona in the Apache-Sitgreaves National Forest. I was about 20-25 miles from the New Mexico border.

The XYL, my 4 yr old, the in-laws, and yours truly spent a most enjoyable time at 9000 ft elevation. I had good success launching a 100' dipole @70 ft. in two 100 ' plus Ponderosa pines about 3 miles from Crescent Lake and Big Lake, AZ. This location has strikingly beautiful scenery, and the

weather was wonderful, too.

I spent most of my ham activity on 40m, with a little bit of time on 20m. 30m and 80m didn't seem too productive at the times I had to operate, so I stayed on my favorite band of 40m. An MFJ-948 tuner and 300 ohm TV line fed the random-length dipole I had pieced together from various scraps of wire that I had left over from numerous antenna projects. It was easily tuned to the desired frequency using my MFJ-259 antenna analyzer. This works very well, and eliminates the need for a separate SWR meter or transmitting a carrier while trying to tweak the tuner for minimum SWR.

Numerous elk, deer (antelope), squirrels, woodpeckers (not that Russian one! ;-),
birds, chipmunks, etc., frolicked around my campsite. While I slipped away from hamming to try my hand a some high-mountain fishing, my XYL (KC7MML) had to explain the wires hanging high in the trees to a National Park ranger. Turns out he remembered hearing something about ham radio while he was in the military, so no citation was issued. Seems he has noticed some survivalists using radios too as they "do" their thing.

I managed to get 3 nice rainbow trout from 1 1/2 to 3 lbs while fishing in Crescent Lake, and a pretty good sunburn on my face in spite of SPF30 sun screen lotion. On Saturday, my father-in-law and I rowed about the ~100 acre lake, but on Sunday we decided to rent a boat with a small outboard so we could do more fishing and less rowing. ;-)

Nighttime temperatures fell to about ~40 degrees F, and the high daytime temperatures never exceeded about 78-80 degrees F. Meanwhile, back in the Phoenix area, temps were hovering around 105-107. Yes, it was wonderful.

Folks, if you get a chance to escape to the high country during the heat of summer, don't hesitate. And if you ever happen to be in the area of Springerville / Eager, Az, check out the nice facilities at Big Lake or Crescent Lake. It is a post-card perfect area to camp, fish, and ham. There was still some snow remaining in some of the shadows and along the top of Baldy Peak, elevation 11,357 ft. The 12v 7amp/hr battery never ran down, (I DO have a spare) and the TAC-1 on 40m and the OHR100 for 20m performed very well. What a pleasure to not have any man-made QRN or EMI to contend with.

Since I had to pack up and store the ham gear each time I left the campsite, I begin to see the attraction of a small, multi-band rig like the Sierra. The separate rigs for 80,40,30, and 20m just take up too much space and require too much packing and unpacking during field operation. Soon, soon, I'll have to address that issue and leave the single - banders at home. ;-)

The topic of each QSO quickly turned to fishing, camping, or some similar

subject as soon as my QTH was known. Most of my contacts were QRO, and all of them commented on the nice signal from the 9000+ elevation antenna site. Several QSOs turned into ragchews, so I didn't rack up that many contacts.

Glad to be back, but I am still sifting through 216+ postings as I write this. This Saturday is the monthly ScQRPion meeting, so I am hoping to see all who can come.

I didn't even get abducted, although my father-in-law did have a DSS dish with his RV, so I still got to see X-file agents Mulder and Scully anyway. Sort of. :-)

Thanks for the bandwidth, and a great hobby with good members. See you soon again from the great outdoors.

72,

Gary Surrency AB7MY
QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH
Az ScQRPions

Date: Wed, 04 Jun 1997 04:26:49 GMT
From: mdwatt@usit.net (Marty Watt)
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [20775] Re: Custom 38 Special Enclosures
Message-ID: <3394edfb.2240284@smtp.usit.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: quoted-printable

On Tue, 03 Jun 1997 20:09:06 -0700, Jerry Parker <jparker@fix.net>
wrote:

>OK,
>
>Doug Hauff KE6RIE has finally done it. =20
>
>You've seen his Custom Enclosures for the 38 Special=20
>
>on last months NorCal Meeting Report.
>
>
>Doug is now making these great enclosures available to everyone.
>

>Check them out at his web site:

Sure looks wonderful -- I'm still waiting to build the second
38Special!

I would request two things, however -- room for an e-dial or the
clock/counter module, and the ability to relabel the "RIT" to RF Out
or Output or something, for those who (like me) plan on doing the RF
Variable Output mod, but not the RIT.

Otherwise, I'll probably get one!

72 es 73 de=20
Marty, KM7W

____
Jackson, Tennessee   e-mail: mdwatt@usit.net
                                  http://www.public.usit.net/mdwatt
                                           "The Curmudgeon's Corner"
NorCal #2031 - ARCI #7514 - QRP-L #953 - AK/QRP #098 - Grid EM55oq
~~~~~~

Date: Wed, 4 Jun 1997 01:19:21 -0400
From: k3lu@juno.com (Ulis R. Fleming)
To: qrp-l@Lehigh.EDU
Subject: [20776] Re: Short Wave Receiver
Message-ID: <19970604.011924.10758.0.K3LU@juno.com>

On Tue, 03 Jun 1997 07:38:28 -0700 Jerry Parker <jparker@fix.net> writes:
>I have a request from the other side for information about short wave
<SNIP> ... ouch!

If you have limited experience building kits then a good start may be
building a crystal receiver for shortwave. I am pretty sure that Ten Tec
makes a regen SW rcvr. Maybe someone has had experience playing with
that.

Good luck!

Ulis

****
Ulis R. Fleming <> Radio Amateur K3LU TI5NW
PLEASE Email only to: ulis@ix.netcom.com
~~~~~~

PLEASE Do Not use the JUNO address

Date: Wed, 4 Jun 1997 01:29:15 -0400 (EDT)
From: Kr0i1@aol.com
To: qrp-l@lehigh.edu
Subject: [20777] 50/40/30 Activity
Message-ID: <970604012914_-1597440686@emout07.mail.aol.com>

Hi Gang,

Enjoyed the contacts tonight and hope I didn't miss
anyone who needed MO. Had a total of 32 contacts,
16 on 30m and 16 on 40m. Four of the 40m contacts
were on 7.112. If I did miss anyone who needed MO,
I'll be glad to schedule another try on an individual basis.
Just drop me a request at kr0i1@aol.com. Here's the
results as I logged them:

ON 30 METERS

Time	Call	His	Mine	QTH	Name	Power
0005	W9UQB	559	559	AZ	Mike	5w
0007	K4NK	569	559	SC	Les	4w
0011	XE1/K8ZAA	559	569	MEX	Randy	5w
0013	K5ID	559	(lost him)			
0022	W6WD(?)	229	339	CA	Dave	2w
0035	N4UY	569	579	VA	Jake	5w
0043	K1SM	579	579	MA	Bill	?
0055	KF4PTZ/m	559	559	SC	Bill	3w
0106	K8CV	579	559	MI	Walt	2w
0109	N1AHT	569	559	NJ	Jay	100w
0120	K4TWJ	579	589	AL	Dave	5w
0126	N2KKW	559	559	SC	Bill	5w
0142	CX9AAK/W2	559	569	NY	Hugo	600mw
0145	WD3P	559	539	MD	Larry	5w
0148	KB8UMD	559	559	MI	John	5w
0155	W5TQO	559	569	TX	Marv	2w

ON 40 METERS

0205	K5ID	569	579	AR	Ken	5w (we made it here!)
0210	K8CV	569	559	MI	Walt	4w
0213	W9KI	559	589	AR	Howard	5w
0216	WA8LCZ	559	549	MI	Byron	5w

0222	AA7JC	449	459	AZ	Ken	3w
0227	WD3P	459	559	MD	Larry	5w
0229	WA4KAC	449	569	MD	Walt	2w
0243	K5LNM	579	579	TX	Guy	20w
0301	WD4MSM	559	559	IN	Barry	5w (7.112)
0307	WB9WAW	569	599	IN	John	3w (7.112)
0336	N0UVR	449	559	CO	Dave	5w (7.112)
0338	KF6CTA	459	559	CA	Dick	5w (7.112)
0347	AB7TK	339	549	ID	Randy	2w
0352	KA3WTF	339	539	PA	Fran	2w
0358	WA2GXE	559	569	NY	John	150w
0402	WA0NKE	569	579	MO	Dale	3w

My key hand was getting in pretty bad shape by the end of the evening...hi. Thanks everyone for your patience. I will QSL all that are in the 96 callbook. If not good there, drop me a QSL or your address and I will respond.

72/73 de Mac, KR0I QRP-L 1037 QRP ARCI 3227
CQC 424 AK/QRP 154 SOWP 3467V

Date: Wed, 4 Jun 1997 00:39:02 -0500 (CDT)
From: Raventhorne <jelder@ix.netcom.com>
To: rattray@siast.sk.ca, "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [20778] Re: Dan's Small Parts
Message-ID: <2.2.16.19970603221935.37c713f4@popd.ix.netcom.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 08:16 AM 6/3/1997 -0600, Bruce Rattray wrote:
>I will be in Missoula next month, probably on July 17. I was wondering if
>it's possible to visit Dan's Small Parts business or is it strictly mail-order
>and one does not "visit"? Naturally if it is possible, I would like to
>purchase a few of the items that he carries. Thanks in advance to anyone who
>is more knowledgable about this than I am...

Call Dan. His phone # is on his web page. However, he has been very adamant in the past about being =STRICTLY= a mail order business.

72,

John

@~~~
@ John Elder, Ko6TS

@ PHROG (Pagan Ham Radio Operators' Guild)
@ Box 232, El Segundo, CA 90245
@ So many fools, so few comets . . .

Date: Wed, 4 Jun 1997 07:54:53 +0200
From: David.Reid@asml.nl (David Reid)
To: Dick@kanga.demon.co.uk
Cc: qrp-l@lehigh.edu, gqrp-l@blacksheep.org
Subject: [20779] Re: Friedricshaven
Message-ID: <199706040554.HAA03220@wspub002.asml.nl>

Dick,

is there a special 'area' for QRPer at Friedricshaven,

Planning to drive down from my QTH in Holland for my first F'shaven event.
I don't have much info... but planning to drive down on the saturday
and camp out overnight... rally on the sunday and drive back either
sunday night or canpout again and drive back on Monday.

Have you got any other info on it?

73
Dave
PA3HBB / G0BZF

PS have space in the car for anyone wanting transport from the Eindhoven
area to Fried'shaven and back

Date: Wed, 4 Jun 1997 02:57:10 -0400
From: Tony Fishpool <G4WIF@compuserve.com>
To: QRP List <qrp-l@Lehigh.EDU>, GQRP List <gqrp-l@blacksheep.org>
Subject: [20780] G-QRP club web pages
Message-ID: <199706040257_MC2-17CD-C507@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: quoted-printable
Content-Type: text/plain; charset=ISO-8859-1
Content-Disposition: inline

Greetings all,

While driving to the Hara Arena via the "secret route" we were
talking about web pages. So George Dobbs said to me "so you
know something about HTML coding eh?". Never admit to anything.
So I now find myself the proud host to the clubs web pages which
were previously to be found on the U.K. Kanga site.

Would you please change your bookmarks and links to the following
URL:

http://ourworld.compuserve.com/homepages/g4wif/gqrp.htm

Any feedback would be welcome. If there is something you want to
see there and there is room for it, I will try to accomodate. I won't be
posting a regular "whats new", I will assume that if you are interested,
you
will visit once in a while. But right now, the Sprat Index to issue 89 is=

now
on line.

My thanks to Dick - G0BPS for looking after the club pages, I will try to=

do
as well.

Kind Regards
Tony - G4WIF/KI8CR

Date: Wed, 04 Jun 1997 04:50:51 -0700
From: "Len Touth - PRIO Corp. - Ohio" <len@infinet.com>
To: JMG@tntech.edu
Cc: qrp-l@Lehigh.EDU
Subject: [20781] Re: GM30-DX
Message-ID: <1.5.4.32.19970604115051.00715b80@infinet.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

RR
I have a GM-15 that is just sitting at my summer QRP operating position
waiting for 15 meters to open. Saturday afternoon, it did for a few hours,
and my 1.5 watts got me a 579 in New Zealand. I love 15 meters when it is
open, and I sure like Dave's Green Mountain line of QRP transceivers.

BTW, my summer operating position is on my patio. It consists of about 5

homebrew QRP rigs, connected to an OHR QRP power/swr meter, and then to the LDG QRP autotuner. This feeds a simple *tree vertical* as described in QST about 8 months ago. A simple hunk of 14 guage wire cut for 20 meters run up the side of a tree, with a wire ring around the base and radials buried slightly under ground. Amazingly good antenna for a few cents worth of wire.

At 07:49 AM 6/3/97 -0500, you wrote:
>Well got home after a really long day and in between boring tv
>turned on my battery powered GM30 .. hooked to a Gap Vertical,
>not even tuned for 30, and too lazy to turn on power supply to use
>auto tuner.
>
>heard OK2FD, worked him first call.. all copied ok, 2x 559
>on <2 watts
>
>love the new rig
>
>72
>Jeff, AC4HF
>
>

Date: Wed, 4 Jun 1997 10:50:14 +0100
From: adams@chuck.dallas.sgi.com (Chuck Adams)
To: G.Heron@dialogic.com
Cc: qrp-l@lehigh.edu
Subject: [20782] RE: CW Bandwidth (the analysis continues)
Message-ID: <199706040950.KAA03342@chuck.dallas.sgi.com>

George et.al.,

There are at work several factors at once, so let me throw in some simple math (I'll take some corners and cut them off, so to speak).

Everyday, some people learn a little more and one of the things that I hope people realize that Mathematics will solve a lot of problems the more and more you learn. Education does not include only the things that you learn in classrooms.

First, let's do some Fourier analysis on a square wave. Been there

and done that. Seems like several years ago I did this before, but hey, I'll do it again. It refreshes the dynamic memory and I'm still suffering from jet lag anyway.

Take a square wave, described mathematically with the definition

```
        f(x) = 0   for   -pi < x < 0
        f(x) = 1   for     0 < x < pi
```

where pi is 3.141592653589793238.... (from memory, so look it up)

Repeat the above function periodically so that you have a square wave from -infinity to +infinity. I've heard people do this on the air and you have too with keyer left on a long time sending dits. :-)

If you do a Fourier analysis, you get

```
 f(x) = 1/2 +  (2/pi)*(  sin(x) + 1/3*sin(3x) + 1/5*sin(5x) + ... )
```

I quote from page 17.50 of the ARRL Handbook of 1995 and later (you do own a copy of the ARRL Handbook gang? People complain that the ARRL is a large publishing house, but I'm glad they are. I'd hate to have to pay $100+ for the same book elsewhere. It is the best investment or one of the better investments you can make.) at 60 wpm the time interval for a dit will be 20ms. This corresponds to a frequency of ..... (drum roll please) 50 Hz. So what you get on the air is the carrier freq, say 7.039MHz, and components at 50 Hz above and below the frequency, 150 Hz (3*50), 250 Hz (5*50), ... with corresponding amplitudes of 1/2 at 7.039MHz, and the sidebands are 2/pi, 2/(3*pi), 2/(5*pi), ... The figure 17.52-B on page 17.50 is what this is plotted with dB values. Also note that the two frequencies closest to the carrier correspond to the 50 Hz values, then the remaining components are spaced at 100 Hz intervals. Neato stuff. Badger fodder.....

Page 6.37 of the ARRL Handbook says "... bandwidth is often defined as the frequency spread between the two frequencies at which the current amplitude decreases to 0.707 (or 1/sqrt(2)) times the maximum value". OK, I've stuck my neck out this far, let's go on.

Freq	Amplitude
7.039MHz	0.50000
7.039MHz+50	0.63662
7.039MHz+150	0.21221
7.039MHz+250	0.12732

but you got the same amplitudes for the frequencies below, so you can double the values for the energy components, so we are talking about a BW of <6 times the keying frequency or about 4 to 5 times the code speed in wpm just to make the mental arithmetic simple. I seem to recall somewhere in print, and I can't find it, a figure of BW = 2.4 x code speed in wpm. Anyone who finds it let me know.

So that is the gory details. EXCEPT, this is worst case scenario. Square wave. With smoothing, the amplitudes will fall off a little faster (someone do the FFTs). But I don't expect much and you may get some of the even harmonics in there also. Also when you throw in random distribution of dahs, this lowers the harmonic content away from the carrier frequency. Think of it this way. As the speed goes to 0 wpm the BW approaches 0 also, i.e. a steady carrier.

Now the ARRL likes a 5mS rise and fall time on transitions for CW. See the wave form on the same page above with the power spectrum curve. At 60wpm this means less than 25% of the space between dits is occupied by a falloff in the signal. The 1/2 power point is still in real close, no problem. But I prefer and have found that 1.5mS to 2.0mS (crisp keying) is even better and especially at QRP levels. Soft keying is just too difficult and not pleasant to work on at any speed. You know what I means kid. Too sharp a keying and spikes generates all kinds of nasty critters and will get you nasty comments almost immediately, both on and off the air.

When you build a rig, kit, or whatever, take a scope and look at the keyed output, please. Make sure it is clean. I don't know about anyone else but I cringe when I see the CW scope and key closure waveforms on high dollar rigs in QST. TenTec does a darn good job and they have the reputation for good QSK rigs on the high end. (An Omni would be good payment for that endorsement. :-) ;-)) Another reason why the QRP community is blessed with a large group of kit and product businesses with great keying characteristics.

Another side item of interest to those that don't think about these things in their quiet moments. At 20wpm we get a bandwidth of say less than 100Hz. And you say --- wait a minute I tune my receiver at 700Hz tone (zero offset from the CW signal (we've discussed this before many a time) and I get one level and I move to say a 500Hz note and I still hear it. Well group, we have the BW of the crystal filter at play now. Say you have a 500 Hz filter. At 250 Hz away from the signal the audio will be down 6dB. There is another critical factor at play and that is the shape factor of the filter. Guys and girls can advertise all they want that they have a 500Hz filter, which means that the signal is down 6dB 250 Hz away from the center freq. But what is the signal

level at 500Hz away? I can still hear it!! You want a steep slope
at the 6dB point, not a level one...... A picture is worth a
thousand words. I'm writing this topic up in a chapter of a
book that I'm working on in my spare time. :-)

I just love it when a plan comes together. A-team.

Oh, going back to the Fourier analysis. One of the main reasons
I do not like to hear people talk about Fireball transmitters on
10M is the harmonic content of the waveform which is output
directly to the antenna. In fact, I'll put up a $100 prize
(I know it is a trivial amount) for the next Dayton for the best
design of a 10M transceiver with a parts cost (not including case)
of under $100. You won't be doing a Pixie II+ at 28MHz!! You
will need a receiver with gain. This in preparation for the sunspot
cycle about to begin and that everyone is getting excited about. I
started my ham career with the best cycle ever and I'd like to go out
with a better one or the number two cycle. :-)

dit dit es FYI   enjoy

Chuck Adams K5FO CP-60 adams@sgi.com
http://reality.sgi.com/adams/
WIMPS: Qs=032 30m=21 17m=5 12m=0 States=19/05/00 DX=03/00/00 QSLs=012

Date: Wed, 04 Jun 1997 06:37:41 -0400
From: Richard Powell <ripowell@mpna.com>
To: qrp-l@Lehigh.EDU
Subject: [20783] Field Day
Message-ID: <1.5.4.32.19970604103741.00697088@smtp.mpna.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Anybody near southeast ohio want to get together on a field day effort???
preferably in a REMOTE area????
rick - wb6jbm

+---+
|Richard Powell   513-942-2542 (h) |
|Systems Integration   513-403-5083 (c) |
|Vertical Solutions Inc.   513-891-7997 (w) |
|http://www.vertsol.com   513-891-8063 (f) |
|ripowell@mpna.com   http://www.mpna.com/ripowell |
+---+

Date: Wed, 4 Jun 1997 11:52:03 +0100
From: adams@chuck.dallas.sgi.com (Chuck Adams)
To: qrp-l@lehigh.edu
Subject: [20784] Antennas and Transmission Lines
Message-ID: <199706041052.LAA03630@chuck.dallas.sgi.com>

Gang,

While at Dayton I picked up a copy of the book

"Antennas and Transmission Lines" by John A. Kuecken

published by MFJ Publishing MFJ-3305 for $19.95

Book is 320 pages. Here are the chapters:

1. A Brief History, Gain, and the Inverse-Square Law
2. Arrays of Sources and Fourier Series
3. Phasing in Arrays
4. Gain and Pattern Integration
5. Huygen's Principle and Wave Interference
6. Near-Zone Wave Interference
7. Standing Waves
8. Geometric Collimators
9. Lenses
10. Collecting Apertures
11. Elementary Radiators
12. Radiation Resistance
13. The Thin Linear Antenna
14. The Travelling-Wave Antenna
15. The Loop Antenna
16. Transmission Lines
17. The Steady-State AC Case and Standing Waves
18. Line Impedance and Matching
19. The Smith Chart and Its Use
20. The Immittance Diagram and Lumped-Circuit Solutions
21. Waveguide Principles
22. Waveguide Devices
23. Directional Couplers and Hybrid Junctions
24. Reactive Elements and Impedance Limits
25. Resonant Circuits and Q
26. Self-Impedance
27. Mutual Impedance and Images

28. Balance
29. Electrically Short Antennas and Short-Antenna Limitations
30. Frequency-Independent Antennas
31. Antifade and Ground-Independent Antennas
32. Reflections in Space
33. Materials Classification and Skin Effect
34. Radio-Range Prediciton---Propagation, Small Antennas, and Radar
35. Half-Space, Ground Waves, and Sky Waves
36. Noise and Radio-Range Predicition
37. Radiolocation and Resolution
and an Index

My book shows First Edition, 2nd Printing 1996. No indication of the original publication date, as I suspect this is a reprint of an earlier book. This I get from the type font and style of the book, but nevermind. It is worth the bucks spent.

Now a lot of people will shy away from this book since it does have integrals and some math in it, but it also has some important and practical stuff. Like if you are using a V-beam wire antenna and each leg is 5 Lambda then the angle between the legs is 44 degrees.

A simple-wire vee is a slopper and it emulates a vee-beam in the vertical plane, thus the direction of propagation is towards the open end.

And there is a picture on the same page which he calls a single-wire vee in a corner. Now I understand a little more why last year at Lake Tahoe with the SWL-40 and a wire near a mountain I was working N-S and I just happened to have the wire at the right angle and in the right direction. Miracles do happen in the field.

The chapter on Materials Classification and Skin Effect is worth the price of the book alone!! And I quote:

"It is noteworthy that htis figure illustrates why low- and medium-frequency ground-wave transmissions are essentially unaffected by snow or rain water on the ground. ... A buried high-frequency antenna in a 6-inch or 1-foot trench would not experience large transmission losses up to 10MHz or more. (However the near-field displacement current loses could be very large.) ..." And he goes on to talk about VLF and submarine communications.

This was a book and notes used at General Dynamics for practicing EE's and Engineers. These are the people doing stuff like RCS, communications, ... So the material should be accurate and useful

in practical applications for hams.

So, if you aren't scared of math, by all means get this book.
I still insist that Antennas are the #1 resource for radio amateurs
and especially for QRPers. Urban legends and myths will not
solve our problems.

Again, I bought this book at Dayton and you should be able to
call MFJ and get it with your plastic card. See any QST or other
ham magazines for the 800 number.

I don't get a dime from MFJ for reviewing this.

You want my review of the MFJ-969 Deluxe Versa Tuner II with the
new roller inductor? Also bought one at Dayton. Going to plug
and play ASAP.

dit dit de sleepless in Dallas

Chuck Adams K5FO CP-60 adams@sgi.com
http://reality.sgi.com/adams/
WIMPS: Qs=032 30m=21 17m=5 12m=0 States=19/05/00 DX=03/00/00 QSLs=012

Date: Wed, 4 Jun 1997 06:16:48 -0400
From: Scott Rosenfeld NF3I <ham@w3eax.umd.edu>
To: qrp-l <qrp-l@Lehigh.EDU>
Subject: [20785] Trees and conductivity
Message-ID: <Pine.3.89.9706040617.A18155-0100000@w3eax.umd.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Someone asked me to make a copy of Nov. 1991 QST, pp. 51-54. It's been
nearly six years, but on p. 53, there's an interesting article on the
dielectric nature of trees. Since we use them so often as antenna
supports, it's important to remember that they're full of cellulose, and
more importantly water, and thus are NOT air, electrically speaking.

Briefly, it was found that trees can significantly affect impedance as
well absorbing power, esp. where voltage maxima are in the proximity of
tree trunks (see TYING THE END OF YOUR ANTENNA AROUND A TREE TRUNK,
something we've likely all done).

Vertical wires get nailed far worse because the tree can actually
couple. Since trees aren't tuned radiators, well...you get the idea...

* Scott Rosenfeld NF3I Burtonsville, MD FM19mc QRV 80-10/6/2/440 *
*** 6m 75 grids worked on 8 watts *** HF 140 cfmd * QRP-L #147 ***
** QRP ARCI #9054 ** DXCC/WAS/WAC *** 100% dipole powered HF/6m **
* 301-549-1022 h / 301-982-1015 w *** Hamfest, life's simple joy *

Date: Wed, 4 Jun 1997 08:04:57 -0400
From: n4js@amsat.org
To: qrp-l@lehigh.edu
Subject: [20786] FS: Centennial Kit
Message-ID: <E0wZEo9-0003bD-00@admin.cyberenet.net>

I don't often sell stuff, but after building a BUNCH of kits, it occurred to me, SSB was one of the reasons I was inactive for almost 10 years, so why build an SSB kit? I enjoy the CW best!

So, for those of you that enjoy inane chatter, I have a "Dan's Centenial 75M SSB transciever kit," still in the bag, for $50 shipped.

Is that a great sales pitch, or what?


```
 _  _  _ _      _  ___   John L. Sielke n4js@amsat.org n4js@pobox.com
| \| || | |  _ | |/ __|  n4js@n4js.ampr.org  NJ Grid:FM29LN
| .` ||_  _|| || |\__ \       http://www.qsl.net/n4js
|_|\_|  |_|  \__/ |___/  NJ-QRP #57  QRP-L #884  QRP-ARCI #9328
NE-QRP #507 G-QRP #9544 CQC CQrp Norcal #1989  QCWA FISTS #2781
```

Date: Wed, 4 Jun 1997 08:18:54 -0400
From: rerobins@unccvm.uncc.edu (Rick Robinson)
To: qrp-l@Lehigh.EDU
Subject: [20787] Distress call on 500 kHz
Message-ID: <v02130504afbb7d0ed44e@[152.15.144.13]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Fellow QRPers and CW lovers,

This might be of interest in light of the "demise" of CW and the 500kHz watch in the maritime world.

from the World Utility News newsletter:

----- Forwarded message begins here -----

Russian-registry ship uses Morse Code after disabled off the Netherlands

The Vera (Russian-registry 1,750-dwt dry cargo ship) was disabled recently when a bridge window broke during bad weather. Water that entered through the hole shut down electrical equipment on the bridge, and the ship drifted towards Terschelling Island, the Netherlands. The only communication equipment working was a 500 KHz broadcasting unit, which the crew used to send a CW (Morse Code) distress signal. A station in Ostend, Belgium, received the signal and the ship was assisted by tugs.

----- Forwarded message ends here -----

'Nuff said.

72,

Rick kf4ar

Date: Wed, 4 Jun 1997 08:52:18 -0400
From: "Mark S. Adams" <msadams@acsu.buffalo.edu>
To: <QRP-L@lehigh.edu>
Subject: [20788] /P Computer Operations
Message-ID: <199706041250.IAA45378@nss2.CC.Lehigh.EDU>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi Gang,

I plan to use my computer, a Compaq Contura 486SL laptop, to do my /P contest and FD logging. I plan on running it off the same marine battery as my Argo 556. So that I can use the computer either in the shack or out in the field I will install a polarized connector in the power cord between the power supply and the coax power connector at the computer.

Can anyone point out the potential problems with this? Do I need to install a choke on the computer power cord to keep out RF? The one thing I do know is that my battery will run both for the whole FD event. I would just hook this up and test it but a) my battery is physically 60 miles from home and

2) I am afraid to hook it up without prior sage advice.

72, Mark N2VPK
Member of the Buffalo QRP Connection
WIMPS: Qs=25/0/0 30m=25 17m=0 12m=0 States=15/00/00 DXCC=06/00/00

Date: Wed, 4 Jun 1997 08:04:09 -0500
From: "Joe Spencer" <joes@tcjc.cc.tx.us>
To: "qrp-l Discussion" <qrp-l@lehigh.edu>
Cc: "Barbara L Spencer" <bspencer@tcjc.cc.tx.us>
Subject: [20789] HAMCOM '97 Arlington Texas
Message-ID: <m0wZGM4-000afkC@strangedays.tcjc.cc.tx.us>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Well this is the weekend!

Friday 6 June1997 Starting at 6pm and lasting all day Saturday and Sunday until Noon, there will another chance to see all your friends, acquaintances, and find more "stuff" for our favorite hobby.

There will be a QRP program Saturday in Room M1 from 11-1300 (Paul Harden NA5N and Doug Hendrix KI6DS are the speakers) and Sunday we have the room from 10-Noon for a QRP forum get together. We will have the same four tables as the last two years and plenty of room for your "stuff" you want to sell. SO plan to stop by and see us if you are there.

72 Joe KK5NA

Joe Spencer
Tarrant County Junior College
Academic Computing Engineer
joes@tcjc.cc.tx.us

Date: Wed, 4 Jun 1997 09:37:49 -0400
From: sarraf@thermacore.com
To: daniel@pandora.lugs.org.sg
Cc: qrp-l@listserv.lehigh.edu, tgordish@concentric.net
Subject: [20790] RE: VHF with NE602As

Message-ID: <852564AC.00480581.00@tci-nt01.thermacore.com>
Mime-Version: 1.0
Content-type: text/plain; charset=US-ASCII

About 3 years ago a friend and I tried to build a 2-meter rig whose reciever used an MC3362 (3?). Due primarily to a lack of time the project never got past the breadboard stage. We did learn a lot and had some of the subsections working.

The PLL/VCO was our own design and worked well. It was based on a 2N5179 (?) colpitts VCO with another 2N5179 serving as a buffer/low pass filter. The output of that circuit was fed to a Motorola synthesizer chip (-170?). The chip had a programmable divider, a buffer, and a phase detector. We were able to get a stable output in 5 kHz steps anywhere between 144 and 148 MHz and could set the frequency via the serial interface built in to the chip.

We also built a low frequency analog of the PLL which worked at 144 kHz. It was based on a 4046 CMOS PLL chip. We used this version as a proof-of-equations breadboard to show that we knew how to calcuate the values of the loop filter and to learn how to talk to the synthesizer's divider registers. The biggest problem we had was that the synthesizer reference oscillator would not work at 100 kHz, so we had to use an external TTL chip instead. We also learned a lot about ground loops in test gear and the importance of hooking up ALL of the supply voltages prior to a test.

The receiver was taken from the test circuit given in the data book. We used TOKO quadrature coils and ceramic filters which were purchased from DigiKey. The reciever chip was only available in a package which looked like a DIP which had been flattened by a flyswatter. This package was not a problem to use. We just soldered its leads to the lands on the board. Reciever performance was not that great however we didn't really give it a fair test. We were not able to test it with an outside antenna, and we used a 10-turn pot to tune the varactor in its LO because we did not yet have it hooked up to our PLL.

My brother the RF engineer from Lucent was also working on a similar project. He didn't get much farther but what he did worked much better than our design. I can forward details of both of these projects to any who are interested.

Dave Sarraf
N3NDJ
Elizabethtown, PA

Date: Wed, 04 Jun 1997 06:28:48 -0700
From: Jay & Jackie <jayboy@psnw.com>
To: qrp-l@lehigh.edu
Subject: [20791] CORA - Field Day?
Message-ID: <3.0.1.32.19970604062848.0069e91c@mail.psnw.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Central Oregon (Bend-Redmond) Where are you going for Field Day? I'll be
in the area and looking for a group.

     Jay, W6JDB

Date: Wed, 4 Jun 97 09:34:52 EDT
From: jeverhar@camden.lmco.com
To: qrp-l@Lehigh.EDU
Cc: jeverhar@camden.lmco.com
Subject: [20792] Re: Fishing Pole for SLV
Message-ID: <9706041334.AA28207@train11.CAMDEN.LMCO.COM>

Gang,

Thank you for all the response about the fishing pole. I did finally order it
from Cabela's. Had I spelled their name correctly in the first palce, (One "l",
not two!) I would have found their web address much easier! Gorsch I shoulda
known better...

BTW, now let me expose my northeast ignorance - What on earth does a non-ham do
with a 20 foot rod? The only ones sold locally are 15 foot max and even they
are hard to find. Do you folks out west have fish that are so bad you will
only touch them with a 20 foot pole?

72/73,

Joe E., N2CX

Date: Wed, 4 Jun 1997 08:35:06 -0500
From: Brian Cieslak <brianc@ams-i.com>

To: "'QRP-L'" <qrp-l@Lehigh.EDU>
Subject: [20793] re:VHF with NE602As
Message-ID: <c=US%a=_%p=Adaptive_Micro_S%l=AMS-I_SERVER_1-970604133506Z-133@ams-i-server-1.ams-i.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
Content-Transfer-Encoding: 7bit

daniel,
get the motorola data sheet from their web site and it has several
circuits and board patterns to use witht he MC3363 FM receiver on a
chip. I have the MFJ Kit version of their monitor receiver(Which
strongly resembles the design on the spec sheet). It's not very
sensitive....and only receives the strongest repeater in the area which
is about 10 miles from my location. But I use only the attached
telecoping antenna.

Brian AE9K

Date: Wed, 4 Jun 97 09:55:54 EDT
From: Clark Fishman <cfishman@pica.army.mil>
To: qrp-l@Lehigh.EDU
Subject: [20794] RX on a Chip
Message-ID: <9706040855.aa07848@pa1.pica.army.mil>

Check out the Mototola MC13030 IC...it is a double conversion
AM receiver on a chip with a first mixer that has a +20 dbm third
order intercept (way better then a 602)...Motorola sent me some
sample chips AND a PC board AND the IF filters to build a prototype
receiver....I have not done that yet...the chip is good from 100 KHz
to 50 MHz....looks like a winner

Clark Fishman WA2UNN   cfishman@pica.army.mil

Date: Wed, 4 Jun 1997 09:05:45 -0500
From: Brian Cieslak <brianc@ams-i.com>
To: "'QRP-L'" <qrp-l@Lehigh.EDU>
Subject: [20795] re:FD Logging Program
Message-ID: <c=US%a=_%p=Adaptive_Micro_S%l=AMS-I_SERVER_1-970604140545Z-166@ams-i-server-1.ams-i.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Content-Transfer-Encoding: 7bit

Don't let CT scare you....We use it at our FD site every year...It takes about 15 minutes to learn all you need to know to log an FD operation....The pre programmed keying messages are a real life saver and its interface is simple.

all you need to know is how to change bands, modes and how to enter data during the contest. the keyer messages are preset as a result of set up menu at the start of the program. the only catch is the minimum keyer speed is 22 wpm. You don't need all the fancy bells and whistles for FD.

After a few contacts (note I don't use the term qso for FD) you will have the function key sequence for keying messages down pat.

Here's a typical scenario:
you hear someone call cq and send his call.

 enter his/her call as you hear it sent - CT will tell you if its a dupe or not
if the call was worked before or a different mode ct can be set up to

display partial calls as you enter them
so you can get a jump on the copy, also if you worked the station before on a different mode or band all the fields will be filled in for you.
Press a function key and ct will send your call

IF the station calls you back enter the exchange
as you hear it (if fields are blank)

press function key to respond with your exchange

press enter to record the contact.

repeat for next 1000 qsoes. nothing to it

If you really get brave there is a function key that sends CQ FD <call>

I thought there was an older version of CT at the QRZ website. If you want to practice I beleive there are a couple of contest training programs at QRZ that
use a CT user interface.

Brian AE9K

Date: Tue, 03 Jun 1997 12:29:39 EDT
From: kd4kzq@juno.com (Jim A Norsworthy)
To: qrp-l@Lehigh.EDU
Subject: [20739] FD Logging Program
Message-ID: <19970603.112411.7679.5.kd4kzq@juno.com>

Gang,

Just my 2 cents worth. Last year for FD we used a new logging program that one member brought in. WE are a small group and I thought, well it'll take most of the day to learn this one. I was pleasantly surprized. The program is definitely not fancy and a sure no-brainer. It only does FD and that's all. You select the band and then either phone or
cw. It does have a few selstions for automatic sending, sort of a hamcom interface I think, but it does dupes and all. I had it up and running in 5 min. The name is simple too, FDLOGGER. I would have to do more research
to find an outlet for the program, in case anyone was interested. Here in
Birmingham we have a local BBS that is HAM oriented and I got my copy there.

Just thought I'd pass along some useful info as Field Day approaches. It's not CT but the learning curve isn't very big at all.

TNX,
72/73 es CUL de Jim KD4KZQ
kd4kzq@juno.com
QRP-L#1060 10-10#66171
"Less is really MORE" think about it

Date: Wed, 04 Jun 1997 10:22:07 -0400
From: Randy Hargenrader <randyh@harksystems.com>
To: qrp-l@lehigh.edu
Subject: [20796] Re: Hunting Wiley Foxii

Message-ID: <33957A0F.F39@harksystems.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Chuck Adams wrote:
>
> Hey Gang,
> QRPers spend more time listening than transmitting. Rule #1.
> Very few work many of the fox stations. See rule #1.
> Go To Rule #1...

While this rule certainly is true...
The cosmic reality of propagation can keep 'ol wiley away despite
the best operating practices.
--
73, (Sir)Randy WJ4P
Knightlites QRP-L #296 ARCI #9152 1996 40-9er High Scorer

Date: Wed, 04 Jun 1997 07:31:52 -0700
From: Roger Hightower <n7kt@dancris.com>
To: qrp-l@Lehigh.EDU
Subject: [20797] FS: MFJ 949E, Kantronics KAM+
Message-ID: <33957C58.B39@dancris.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I have tghe following items for sale:

MFJ 949E tuner, 10-160M, excellent condition, includes manual and wall
wart. $95.00 shipped.

Kantronics KAM+ All-mode TNC. Dual port, does packet, RTTY, CW, AMTOR,
PACTOR, etc. Includes manuals, cables, Hostmaster II software.
Excellent condition. $200.00 shipped.

Pse respond direct. Will hold replies until 1500Z 6/5/97 and then draw
from the hat, as suggested by another lister.

72...Roger, N7KT
--
72/73 de Roger N7KT   n7kt@dancris.com   Mesa, AZ   Grid DM43cj
NorCal 1099 CoQRP 176 QRP-L 62 G-QRP 9081 ARCI 8946 NE-QRP 383
AK-QRP 167

Date: Wed, 04 Jun 1997 09:37:55 -0400
From: rhiller@sysdev.com (Rick Hiller)
To: qrp-l@lehigh.edu
Subject: [20798] Communication Quarterly Articles?
Message-ID: <2.2.32.19970604133755.006aa51c@stephen.sysdev.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Howdy folks,

Can anyone tell me where I can get back issue articles from Communication
Quarterly magazine?

Looking for fractal antenna articles. These are small size but full
performance (or so claimed) antennas. Maybe good for portable work.

73...Rick....W5RH
Rick Hiller
Manager, Business Development
System Development, Inc.
Houston, Texas
rhiller@sysdev.com

Date: Wed, 4 Jun 1997 10:44:46 -0400
From: jsielke@pobox.com
To: qrp-l@Lehigh.EDU
Subject: [20799] Centennial Kit Sold!
Message-ID: <E0wZHIp-00009Q-00@admin.cyberenet.net>

This is amazing. In less than an hour, 5 offers on the thing. A lot of
budding 75M SSBers out there.....frightening!!!

Oh well, I broke down and ordered a 38 SPL, since that custom enclosure
looked so neat! Besides, 30M has become my favorite band!

CW forever, ZUT, and all that stuff!

John L. Sielke n4js@amsat.org n4js@pobox.com
n4js@n4js.ampr.org NJ Grid:FM29LN
http://www.qsl.net/n4js

```
   |_|\_|  |_|  \__/ |___/  NJ-QRP #57  QRP-L #884  QRP-ARCI #9328
   NE-QRP #507 G-QRP #9544 CQC CQrp Norcal #1989  QCWA FISTS #2781



Net-Tamer V 1.08.1 - Registered



------------------------------

Date: Wed, 4 Jun 1997 10:50:31 -0400 (EDT)
From: N2QCE@aol.com
To: qrp-l@Lehigh.EDU, tenten-l@Lehigh.EDU, bnlarc-l@bnl.gov, liqrp@waterw.com
Subject: [20800] Slow CW today 6/4/97  28.170 from 1400 UTC
Message-ID: <970604104825_677745299@emout07.mail.aol.com>

I'll be on 28.170 mHz from 1400 UTC today, 6/4/97 for slow CW. I have a 10-10
number and IOTA NA026 to offer... Stop by and say hello. I'll be listening.

Best 73 es hope to see you on 10 Meters



John M. Evans  N2QCE
E-mail n2qce@aol.com
http://www.islandlink.com/n2qce



------------------------------

Date: Wed, 04 Jun 1997 09:00:12 -0600
From: Larry East <w1hue@amsat.org>
To: qrp-l@Lehigh.EDU
Subject: [20801] RE: QRP-L Hints and Kinks
Message-ID: <2.2.16.19970604150012.1c37345c@eloi>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

>
>Perhaps it may be a real good idea to offer equipment for sale to QRP-L
>but hold all offers for 24 hours and draw one out of a hat?  I don't know,
>but I heard the disappointment in those voices and could almost read the
>same in the emails I received.  One of the reasons it's a great idea to
>sell/buy through QRP-L is that this is a pretty tight-knit group and
>nobody here would consider stiffing another member.
>
```

An excellent suggestion! I made a similar suggestion a little over a year ago and you wouldn't believe the "nasty grams" that I received! All sorts of crap about "first come, first served" etc. Also comments that it was "too much of a bother" to pick names out of a hat (geezzz, how lazy can you get??).

I have done just as you suggested for the few items that I have sold via this list and it worked just fine for me...

PLEASE, FOLKS, GIVE THIS SUGGESTION SERIOUS CONSIDERATION!!

_____
"Any opinions expressed herein are my own and probably do
not agree with those of my employer, the U.S. Government
or my spouse"
--... ...--
Larry V. East (W1HUE)
Idaho Falls, ID
e-mail: w1hue@amsat.org
work: (208) 526-0081 home: (208) 529-2162

Date: Wed, 04 Jun 1997 11:38:56 -0400
From: rayj@starbase.net (Ray Johnston)
To: qrp-l@Lehigh.EDU
Subject: [20802] FDIM Building Contest - Where's the Pictures?
Message-ID: <33958C10.1203D85B@starbase.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Has anyone posted the pictures of the winning (and not so winning) entries
in the FDIM Norcal Builders Contest? I had to cancel the trip at the last
minute, but would like to see what people built. Thanks...

Ray Johnston
Digital Visions Corporation

Date: Wed, 04 Jun 1997 08:54:34 -0700
From: Steve Miller <kg7pv@teleport.com>

To: qrp-l@lehigh.edu
Subject: [20803] 38S xtal mod
Message-ID: <3.0.1.32.19970604085434.0068e3f4@mail.teleport.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi all,
Help! Would the kind soul who sent me the info on doing a mod by removing R6 and changing the values of c9 es c10 please send it again. I accidentally deleted the msg.
Thanks!!! 73

Steve Miller kg7pv @ teleport.com Portland, OR
(CN-85) Norcal #308 QRP-L #109 ARCI # 9230

Date: Wed, 04 Jun 1997 10:27:54 -0500
From: AA0QX <AA0QX@prodigy.net>
To: qrp-l@Lehigh.EDU
Cc: msadams@acsu.buffalo.edu
Subject: [20804] Computer and rig on same battery
Message-ID: <3395897A.37E3@prodigy.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I have used a marine battery to power both an Icom 751A and an IBM Thinkpad computer for several years with no particular problems and no special hardware. I do use polarized connectors. Hope this works

72 de Austin aa0qx

Date: Wed, 4 Jun 1997 09:13:11 -0700
From: "Michael A. Gipe" <mgipe@reliablemeters.com>
To: "QRP-L list server" <qrp-l@lehigh.edu>
Subject: [20805] 50/40/30 schedule
Message-ID: <199706041614.LAA21349@multi13.netcomi.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1

Content-Transfer-Encoding: 7bit

Here is the latest schedule for the 50/40/30 operation.

As you can see, there are still lots of holes, so if you can voluteer to represent your state, please e-mail me at mgipe@reliablemeters.com

Mike K1MG

50/40/30 schedule:

UTC	Band
0000-0200	30
0200-0400	40

Date (LOCAL)	State	Call	Name
18 March	IN	WD4MSM/N9DD	BARRY/TOM
20 March	AZ	KI7MN/NQ7K/N7VE	BOB/MIKE/DAN/JOE
25 March	RI	K8ZFJ	RANDY 40 M ONLY
27 March	DE	K3QIO	JIM
1 April	CO	(op:AA0XI)/W0CQC/N3QOO	MARSHALL/JOHN
3 April	NY	N2VPK/WZ2T/KB2YWT	MARK/RICK/DAVE
5 April	AK	AL7FS	JIM
8 April	AR	K5ID/W0LK/W7KXB	KEN/BOB/BILL
10 April	TN	WS4S/KM7W	CONARD/MARTY
12-13 April	ND	N0UR	JIM
15 April	OK	AB5UA	CLIF
17 April	MT	N7GS	MAL
22 April	IA	KQ0I	MARK
24 April	IA	KD0CA	JERRY
29 April	OH	K8IDN	STEVE
1 May	MA	WA1QVM	JOEL
6 May	MN	K0EVZ	DOC
8 May	OR	N7CQR	DAN
13 May	AL	KS4L	RANDY
15 May	NJ	KA2PQY	MIKE
20 May	TX	NR3E/KJ5VW	DAVE/GARY
22 May	MS	K5XU	MIKE
27 May	VA	N4ROA	DAN
29 May			
3 June	MO	KR0I	MAC
5 June			
10 June	CT	AA1MY/N1ST	SEAB/SCOTT
12 June	SC	N4NK	LES
17 June	PA	NR3Z	MARTIN
19 June			

24 June	ID	AB7TK	RANDY
26 June	NE	WB0QQT	STEVE
1 July	MI	WA8LCZ	BYRON
3 July			
8 July			
10 July			
15 July	WV	W9XN/8	MARTIN
17 July			
22 July			
24 July			
29 July			
31 July			
5 August			
7 August			
12 August			
14 August			
19 August			
21 August			
26 August	KS	N5CLU	STEVE
28 August			
2 Sept			
4 Sept			

Date: Wed, 04 Jun 1997 09:14:34 -0700
From: Bill Todd <bill@techline.com>
To: qrp-l@Lehigh.EDU
Subject: [20806] QRP Clubs & FD 97' (Read Pse)
Message-ID: <1.5.4.32.19970604161434.006cc3dc@mail.techline.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hello Group -

The "NWQ" Newsletter is just about finished for June, but before I put it to "bed" (as they say), I would like to include as much info about YOUR CLUB'S FD SITE & a contact person to call for information.

EX: CO-QRP's contact person is Paul, KF7MD (PH: ???-???-????)and they are holding their event at the ??? site.

NW-QRP's contact person is Bill, N7MFB (PH: 360-875-6777)and they are holding their event in Bay Center, WA.

Remember folks that many QRPers do NOT get the QRP-L daily posts (or even in the

Digest Mode).

As soon as I get the list together, I will include it in a FD article in both the E-mail newsletter as well as the printed document.
Please get me your info by this Friday. Thanks!

BCNU,
CUL - Bill-N7MFB
http://www.techline.com/~bill

Date: Wed, 4 Jun 1997 12:43:19 -0500
From: fmathews@norfolk.infi.net (Frank Matthews)
To: jeverhar@camden.lmco.com
Cc: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [20807] Re: Fishing Pole for SLV
Message-ID: <v01530500afbb586705b0@[208.131.169.231]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

>BTW, now let me expose my northeast ignorance - What on earth does a non-ham do
>with a 20 foot rod? The only ones sold locally are 15 foot max and even they
>are hard to find. Do you folks out west have fish that are so bad you will
>only touch them with a 20 foot pole?

Joe, the non ham goes CRAPPIE (pronounced "crop ee" not crap ee) FISHING. These fish can be spooked easily. The further away the better...hence 20 FT. This fish is very popular in the east...especially the southeast. They are also very good to eat. Most consider them the "flounder" of freshwater.

73, Frank

Frank Matthews
Technology Education Department
Oscar F. Smith High School
1994 Tiger Drive
Chesapeake, VA 23320
(757) 548-0696 Ext. 51
Email/fmathews@norfolk.infi.net

Date: Wed, 4 Jun 1997 09:24:58 -0700
From: torell@sicom.com (Kent Torell)
To: qrp-l@Lehigh.EDU
Subject: [20808] HB: Re: RX on a Chip
Message-ID: <v02130501afbb45140fca@[192.91.202.41]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

>Check out the Mototola MC13030 IC...it is a double conversion
>AM receiver on a chip with a first mixer that has a +20 dbm third
>order intercept

I'm planning on using this part also (when time permits, like, next year :-(

I did some preliminary measurements using the eval board. Set the L.O. to
run around 7.7 Mhz and measured:

50 ohm in to 50 ohm out (designed for higher impedance) -22 dB gain
        noise figure not measured yet...data sheet looks like 25 db or so...

two-tone 3rd order intercept point measured +23 dBm referenced at input.

Major mixing spurs on output of first mixer:

rf x lo
 1 x 3   -10 dBc for all input levels
-1 x 2   -47 dBc for all input levels

 2 x 2   -55 dBc for +5 dbm input, decreasing 3 dBc per dB input level drop
 2 x 3   -49 dBc   (ditto)

Parts are available, but through motorola distributors. They are used in
some japanese radios.

Probably won't get to do more stuff till late this fall...trying to bring
another new transceiver to life before a November conference...

Kent Torell   torell@sicom.com   602-607-4852
SICOM   7585 E. Redfield, #202   Scottsdale, AZ   85260

Date: Wed, 04 Jun 1997 09:48:09 -0700
From: Doug Hendricks <ki6ds@dpol.k12.ca.us>
To: qrp-l@Lehigh.EDU
Subject: [20809] Wayne Smith, K8FF email address??
Message-ID: <3.0.1.32.19970604094809.006c110c@telis.org>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Sorry for the bandwidth, but does anyone know Wayne Smith's, K8FF, email address? I would appreciate it very much. 72, Doug, KI6DS

Date: Wed, 4 Jun 97 17:26:11 UT
From: "GREG " <KB2QQM@msn.com>
To: "QRP-L (SENDING ? TO QRP-L)" <qrp-l@Lehigh.EDU>
Subject: [20810] LOOKING FOR W5ACM...
Message-ID: <UPMAIL05.19970604172648089 2@msn.com>

hello, im looking for the w5acm. i was his first contact with his 38-s and would like to send a qsl card. 30m has sure been booming lately, also worked CT3, AND LZ1. "72"
  GREG KB2QQM@msn.com

Date: Wed, 04 Jun 1997 08:50:48 -0700
From: Ken Lopez <kjlopez@earthlink.net>
To: adams@chuck.dallas.sgi.com
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [20811] Re: Antennas and Transmission Lines
Message-ID: <33958EDA.3DCF@earthlink.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Chuck, and all,

I bought this antenna book some months ago at HRO in Burbank, and have recently noticed it in stock both in Anaheim and BBK. Should be easy to find, and I agree, it is a good one.

Cheers,

Ken, N6TZV

Date: Wed, 4 Jun 1997 10:39:00 -0500
From: Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
To: w7rfm@juno.com (Receipt Notification Requested)
Cc: qrp-l@Lehigh.EDU
Subject: [20812] ARS Demise
Message-ID: <M1935078.002.9iz91.1.970604175221Z.CC-MAIL*/OU=LMPCC4/OU=ILBB/PRMD=MOT/ADMD=MOT/C=US/@MHS>

John:

What a bummer. I spent many a happy Saturday poking around the old Amateur Radio Supply store, checking out the used gear. I bought stuff from Dick? Aspinwall when I came home from the Army in '58, and continued for many years 'til I moved away after college at the UW. Still have a lot of it, too. When he moved to Georgetown, I used to have a heck of a time finding the right street.

Even after he sold the business, I could find him in there on Saturdays at times.

Real sorry to see an old friend go.

73, Bob N6WG (ex W7SMC)

Date: Wed, 4 Jun 1997 11:11:00 -0500
From: Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
To: qrp-l@Lehigh.EDU (Receipt Notification Requested)
Subject: [20813] 24 hr clock
Message-ID: <M1935145.002.9kgb1.1.970604182411Z.CC-MAIL*/OU=LMPCC4/OU=ILBB/PRMD=MOT/ADMD=MOT/C=US/@MHS>

I've been looking for a good digital display 24 hour clock for my shack. So far haven't seen anything I liked

Can anyone recommend one that you have found satisfactory? And where you found it?

Thanks, Bob N6WG

Date: Wed, 4 Jun 1997 14:30:51 -0400 (EDT)
From: "J. Skalski" <jskalski@acsu.buffalo.edu>
To: qrp-l@Lehigh.EDU
Subject: [20814] CQ W1LP
Message-ID: <Pine.GSO.3.96.970604142942.21014A-100000@hercules.acsu.buffalo.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Does anyone happen to know the email address for Clint?

73,

Jim N2GO
The Buffalo QRP CONNECTION
ARCI #9013 QRP-L #381
Life member ARRL
jskalski@acsu.Buffalo.EDU

Date: Wed, 4 Jun 1997 14:41:42 -0400 (EDT)
From: "J. Skalski" <jskalski@acsu.buffalo.edu>
To: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [20815] Re: CQ W1LP
Message-ID: <Pine.GSO.3.96.970604144130.21014D-100000@hercules.acsu.buffalo.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Thanks for the replies.

73,

Jim N2GO
The Buffalo QRP CONNECTION
ARCI #9013 QRP-L #381
Life member ARRL
jskalski@acsu.Buffalo.EDU

Date: Wed, 4 Jun 1997 14:58:35 -0400
From: n4js@amsat.org
To: qrp-l@lehigh.edu
Subject: [20816] Centennial SOLD!
Message-ID: <E0wZLGS-0007GB-00@admin.cyberenet.net>

Thanks guys. It sold very quickly. Had LOTS of responses. A lot of wannabe SSBers out there ;-)


```
 _  _  _ _      _  ___   John L. Sielke n4js@amsat.org n4js@pobox.com
| \| || | |  _ | |/ __|  n4js@n4js.ampr.org  NJ Grid:FM29LN
| .` ||_  _|| || |\__ \       http://www.qsl.net/n4js
|_|\_|  |_|  \__/ |___/  NJ-QRP #57  QRP-L #884  QRP-ARCI #9328
NE-QRP #507 G-QRP #9544 CQC CQrp Norcal #1989  QCWA FISTS #2781
```

Date: Wed, 04 Jun 1997 14:38:49 -0400
From: Stephen Gibson <SWGibson@worldnet.att.net>
To: qrp-l@Lehigh.EDU
Subject: [20817] GQRP address
Message-ID: <19970604191916.AAA18838@DEFAULT>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Can someone give me the address of the US rep for GQRP? I sent my membership renewal to Mike Kilgore, KG5F, but the PO just returned it with the notation "moved".

Thanks, 73

Steve, WB4NBI

Date: Wed, 04 Jun 1997 12:25:19 PDT
From: "Howie Weinstein" <k3hw@hotmail.com>

To: njqrp@njqrp.org, qrp-l@Lehigh.EDU
Subject: [20818] For Sale: New/In-Box   WM-20 20M SSB QRP kit
Message-ID: <199706041925.MAA18772@f47.hotmail.com>
Content-Type: text/plain

Fellow QRPers

NEW/IN-BOX SMALL WONDER LABS WM-20 20 Meter SSB Transceiver kit -
$150.00 postpaid.

I purchased this kit directly from Dave Benson NN1G at a recent NE-QRP
meeting held at ARRL Hadquarters this past spring.

 As you all know I was recently laid-off from Lockheed-Martin. My job
hunt continues and is going well with interviews all this week but we
still need a few dollars to make it to our first payday!

Tnx es 72
Howard Weinstein K3HW
460 B Barton Run Blvd
Marlton, NJ 08053

(609) 596-4548

Get Your *Web-Based* Free Email at http://www.hotmail.com

Date: Wed, 04 Jun 1997 15:36:00 -0700
From: Brad Mitchell <bmitchel@kodak.com>
To: Bob_Tellefsen-CNSE97@email.mot.com
Cc: qrp-l@lehigh.edu
Subject: [20819] Re: 24 hr clock
Message-ID: <3395EDD0.4FCD@kodak.com>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Bob, & gang..

I have tired everything under the sun. I simply cannot find
a good 24 hour digital clock, because I absolutely hate it when the darn
thing is wrong, due to a power outage, or whatever.

So finally I ploped down a big $20.00 on a MFJ
24 hour AA battery powered wall clock, and couldn't
be happier! It always runs, even when the power is
off, and even after returning from vacation when I've
unplugged everything in the shack before leaving.
Sidenote:
I never would have bought the MFJ clock prior to listening
to MFJ himself talk at Dayton, but hearing him talk convinced
me that he started from the ground up, and payed his dues.
Now, I proudly display the clock!
Maybe I'm easily swayed?
     73 Brad WB8YGG

Bob Tellefsen-CNSE97 wrote:
>
> I've been looking for a good digital display 24 hour clock for my

---

Date: Wed, 4 Jun 1997 15:17:41 -0500 (CDT)
From: george fremin iii <geoiii@bga.com>
To: qrp-l@lehigh.edu
Subject: [20820] TopBand: RE: Small 24 Hour clocks (fwd)
Message-ID: <199706042017.PAA21542@zoom.bga.com>
Content-Type: text

Here is a copy of a message I saved about a clock
that sounded very cool. I have not gotten one yet.

George
K5TR
geoiii@bga.com

frenaye@pcnet.com writes:
>From owner-topband@paris.akorn.net Tue Jan 21 19:25:37 1997
>X-Authentication-Warning: paris.akorn.net: majordom set sender to owner-topband
using -f
>X-UIDL: 853985015.023
>From: frenaye@pcnet.com
>Date: Tue, 21 Jan 97 19:37:00 EST
>Subject: TopBand: RE: Small 24 Hour clocks
>To: *** YCCC *** <yccc@yccc.org>
>Cc: topband@contesting.com
>X-Priority: 3 (Normal)
>X-Mailer: Chameleon 4.6, TCP/IP for Windows, NetManage Inc.

>Message-Id: <Chameleon.970121194313.frenaye@K1KI.pcnet.com>
>Mime-Version: 1.0
>Content-Type: TEXT/PLAIN; CHARSET=US-ASCII
>Sender: owner-topband@akorn.net
>Precedence: bulk
>X-Status:
>
>
>I ordered a couple of these clocks - Very FB! A couple of notes though:
>
>1) Tell them you saw them in catalog #L1C1-1894 and the shipping cost will
>be waived ($4.95 for one, $5.95 for two).
>
>2) Mine arrived with dead batteries. When I called customer support they
>told me to go out and buy replacement batteries and send them a copy of the
>invoice for credit.
>
>   73 Tom
>
>
>--- On Sun, 12 Jan 1997 14:23:12 EST km1h@juno.com wrote:
>
>>Found this little tidbit on the QRP reflector. Sounds like a nice
>>alternative to the MFJ junk which has been getting quite a thrashing
>>there lately. We need to get all those Heard QSO's logged correctly!
>>73....Carl   KM1H
>>
>>
>>On Sun, 12 Jan 1997 10:48:14 -0600 watkins <watkins@socketis.net> writes:
>>>Hi, Friends -
>>>
>>>I have watched the discussion of 24 hour format clocks, and
>>>would like to let you all know that my favorite shack clock
>>>is now available, real cheap.
>>>
>>>Made by Oregon Scientific, it has a 2 1/4 X 1 1/2 inch see-through
>>>display (LCD? I don't know the exact tech description) which gives
>>>time (24 hr, selectable) in 1/2 inch letters, as well as the date
>>>(in my favorite 12/1/97 format) and also a small calendar for the
>>>month in question, automatically updated for 200 years.
>>>
>>>At a push of a button, it gives you another time zone. Mine displays
>>>Zulu, (and also the date in Zulu, to avoid logging confusion) with
>>>CST available at the button push. It has an alarm, and
>>>also a thermometer (C or F) which notifies me how hot it gets under
>>>my desk lamp, which is important since my cat sleeps there sometimes
>>>and I wouldn't want to broil his meager brain. It has been accurate
>>>and reliable so far, uses a G13 lithium button battery (1 year and

>>>still ticking), and comes with adequate documentation.
>>>
>>>On sale for $14.99 from Heartland America, 1 800 229 2901, shipping
>>>free,
>>>Item number L1-8916. I paid 30 bucks, and never felt cheated at that
>>>price. No financial interest blah blah blah...See you all on the
>>>radio.
>>>
>>>73 de Daniel
>
>
>--
>E-mail: frenaye@pcnet.com
>Tom Frenaye, K1KI, P O Box 386, West Suffield CT 06093 Phone: 860-668-5444
>
>
>--
>FAQ on WWW: http://www.contesting.com/topband.html
>Submissions: topband@contesting.com
>Administrative requests: topband-REQUEST@contesting.com
>Sponsored by Akorn Access, Inc & N4VJ / K4AAA
>

--

George Fremin III
Austin, Texas C.K.U.   "It is hard to be in one place at the same time."
K5TR   -- Overheard at the TR-Log booth
512/416-7010   at the Dayton Hamvention
geoiii@bga.com

Date: Wed, 4 Jun 1997 16:15:22 -0400 (EDT)
From: George Gingell <k3tks@u1.abs.net>
To: Mike Czuhajewski <wa8mcq@u1.abs.net>
Cc: "Joe Everhart (n2cx@voicenet.com)" <jeverhart@cayman.vf.mmc.com>, "Bob (NJ-QRP) " <bob@waterw.com>, "N.J. QRP Club List Server" <njqrp@njqrp.org>,
     QRP List <QRP-L@lehigh.edu>
Subject: [20821] ARRL SS Contest Sponsor
Message-ID: <Pine.BSI.3.93.970604160205.29334A-100000@u1.abs.net>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Gang,
Just a quick note to all to advise that The Maryland Milliwatt Club

will be Sponsoring the QRP CW Plaque for the New England Division
in the Fall ARRL SS Contest.

We actually wanted the Atlantic Division, but that was taken by
Randy Rand, AA2U.

Michigan QRP Club is Sponsoring one and Chuck Adams, K5FO is also
sponsoring one.

FYI- There are still a few Divisions open for sponsorship.

I left the Hudson Division in case the NJ-QRP Cllub might want to
sponsor it.

Any Club or Individual who would like to Sponsor a Plaque can do it
by contacting Billy Lunt, KR1R at A.R.R.L. <blunt@arrl.org>
Telephone (860)-594-0252

QRP Amateur Radio Club International has one of the Overall Plaques.

Let's help give recognition to the QRPers in these contests and promote
the concept of QRP to all.

TKS,
Danny

72 ES
QRP DX TU (C) 1986, G. Danny Gingell, K3TKS@abs.net "Danny"
Maryland Milliwatt Club QRP Reference Library, (301)572-6789
QRP ARCI Net Manager and Board of Director Member.

ARCI #4368 G-1290 M-192 NE-28 NW-14 NorCal-926 CQC-349 FB-51 MDMW #1
QRP-L #216 CQrp #42 AK-QRP #195 KL-QRP ARS-#176 NJ-QRP #78 QCWA #23739
CP-25 WAS QRPp QNI-1000 Milliwatt Beacon Hunter KMWA KL-Mw Award
Grid Square FM19mb 76.94 W - 39.06 N Silver Spring, MD 20904

Date: Wed, 04 Jun 1997 16:02:22 -0400
From: Zack Lau <zlau@arrl.org>
To: qrp-l@Lehigh.EDU
Subject: [20822] Re: Oscillator design
Message-ID: <3395C9CE.4EF1@arrl.org>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

John Mckee wrote:
>
> Hello Gang,
>
> I am trying to design an 80m crystal oscillator from scratch. It seems
> like when I get the feedback high enough to get good keying, I also get
> a distorted output waveform. Even when I shift the DC bias point, the
> waveform

You are trying to design something that is very difficult to design.

A much better approach is to add an amplifier and something known
as differential keying. To get full QSK, you turn on the oscillator
and then turn the amplifier on and off to get the proper waveshape.
Finally, you turn the oscillator off so it doesn't bother the receiver.
Done properly, you can get a signal that sounds better than some kilobuck
radios.

The October 1989 QST shows an example--it even covers the
"tough" case of a VXO--Zack W1VT

> still doesn't cleanup very well. Is a crystal oscillator always suppose
> to have
> a pure sine wave output or am I still way off base? I've tried several
> different
> types, eg. peirce, collpitts etc. but still don't get the results I'm
> looking
> for. Do I need to change my assumptions? You know what they say
> about assuming incorrectly. Any suggestions would be greatly
> appreciated.
>
> 73 es tnx
>
> John WB4OFT
> jmckee@rfmd.com

Date: Wed, 04 Jun 1997 16:54:50 EDT
From: rob3ert@juno.com (Robert G. Parks)
To: geoiii@bga.com
Cc: qrp-l@Lehigh.EDU
Subject: [20823] Re: Small 24 Hour clocks (fwd)
Message-ID: <19970604.135333.8614.2.rob3ert@juno.com>

Gang,

I just called Heartland and these are all gone! The rep said that it
didn't look like they would be able to get any more.

C'est dommage.

Bob Parks
K6AEC (Las Vegas)

On Wed, 4 Jun 1997 15:17:41 -0500 (CDT) george fremin iii
<geoiii@bga.com> writes:
>Here is a copy of a message I saved about a clock
>that sounded very cool. I have not gotten one yet.
>
>
>George
>K5TR
>geoiii@bga.com
>
>
>frenaye@pcnet.com writes:
>>From owner-topband@paris.akorn.net Tue Jan 21 19:25:37 1997
>>X-Authentication-Warning: paris.akorn.net: majordom set sender to
>owner-topband using -f
>>X-UIDL: 853985015.023
>>From: frenaye@pcnet.com
>>Date: Tue, 21 Jan 97 19:37:00 EST
>>Subject: TopBand: RE: Small 24 Hour clocks
>>To: *** YCCC *** <yccc@yccc.org>
>>Cc: topband@contesting.com
>>X-Priority: 3 (Normal)
>>X-Mailer: Chameleon 4.6, TCP/IP for Windows, NetManage Inc.
>>Message-Id: <Chameleon.970121194313.frenaye@K1KI.pcnet.com>
>>Mime-Version: 1.0
>>Content-Type: TEXT/PLAIN; CHARSET=US-ASCII
>>Sender: owner-topband@akorn.net
>>Precedence: bulk
>>X-Status:
>>
>>
>>I ordered a couple of these clocks - Very FB! A couple of notes
>though:
>>
>>1) Tell them you saw them in catalog #L1C1-1894 and the shipping cost

>will
>>be waived ($4.95 for one, $5.95 for two).
>>
>>2) Mine arrived with dead batteries. When I called customer support
>they
>>told me to go out and buy replacement batteries and send them a copy
>of the
>>invoice for credit.
>>
>>   73 Tom
>>
>>
>>--- On Sun, 12 Jan 1997 14:23:12 EST km1h@juno.com wrote:
>>
>>>Found this little tidbit on the QRP reflector. Sounds like a nice
>>>alternative to the MFJ junk which has been getting quite a thrashing
>>>there lately. We need to get all those Heard QSO's logged correctly!
>>>73....Carl   KM1H
>>>
>>>
>>>On Sun, 12 Jan 1997 10:48:14 -0600 watkins <watkins@socketis.net>
>writes:
>>>>Hi, Friends -
>>>>
>>>>I have watched the discussion of 24 hour format clocks, and
>>>>would like to let you all know that my favorite shack clock
>>>>is now available, real cheap.
>>>>
>>>>Made by Oregon Scientific, it has a 2 1/4 X 1 1/2 inch see-through
>>>>display (LCD? I don't know the exact tech description) which gives
>>>>time (24 hr, selectable) in 1/2 inch letters, as well as the date
>>>>(in my favorite 12/1/97 format) and also a small calendar for the
>>>>month in question, automatically updated for 200 years.
>>>>
>>>>At a push of a button, it gives you another time zone. Mine
>displays
>>>>Zulu, (and also the date in Zulu, to avoid logging confusion) with
>>>>CST available at the button push. It has an alarm, and
>>>>also a thermometer (C or F) which notifies me how hot it gets under
>>
>>>>my desk lamp, which is important since my cat sleeps there
>sometimes
>>>>and I wouldn't want to broil his meager brain. It has been
>accurate
>>>>and reliable so far, uses a G13 lithium button battery (1 year and
>>>>still ticking), and comes with adequate documentation.
>>>>
>>>>On sale for $14.99 from Heartland America, 1 800 229 2901, shipping

>
>>>>free,
>>>>Item number L1-8916. I paid 30 bucks, and never felt cheated at
>that
>>>>price. No financial interest blah blah blah...See you all on the
>>>>radio.
>>>>
>>>>73 de Daniel
>>
>>
>>--
>>E-mail: frenaye@pcnet.com
>>Tom Frenaye, K1KI, P O Box 386, West Suffield CT 06093 Phone:
>860-668-5444
>>
>>
>>--
>>FAQ on WWW: http://www.contesting.com/topband.html
>>Submissions: topband@contesting.com
>>Administrative requests: topband-REQUEST@contesting.com
>>Sponsored by Akorn Access, Inc & N4VJ / K4AAA
>>
>
>
>--
>
>George Fremin III
>Austin, Texas C.K.U.   "It is hard to be in one place at the same
>time."
>K5TR   -- Overheard at the TR-Log booth
>512/416-7010   at the Dayton Hamvention
>geoiii@bga.com
>
>

Date: Wed, 4 Jun 1997 17:17:24 PST
From: wb2vuo@juno.com (William K Hibbert)
To: qrp-l@Lehigh.EDU
Subject: [20824] FS/FT: Yaesu FT-707
Message-ID: <19970604.171731.4567.0.wb2vuo@juno.com>

After looking at all the prices, I have reduced the price ont he Yeasu
FT-707 (80 - 10 Mtrs, including WARC) to $350 if you pick it up and $375
shipped.

This will give me enough to get the OHR400. I'd like to get the OHR early enough to run it on Field Day.

Still open to swaps for an OHR400, with or without a cash balance, depending on accessories.

Drop me a line if you are interested, or need more info on the FT-707

72/73, Keith, WB2VUO, QRP-L #582, scQRP 40, 100% QRP
Tech Specialist (ARRL/WNY), ARRL Life Member,
Trustee, NQ2RP/B 10 Mtr QRP Beacon (4 Watts @ 28.2870 MHz)
"In the Depths of the Great Bergen (NY) Swamp...FN13ac"
Packet - wb2vuo@w2im.#wny.ny.usa.noam *** Email - wb2vuo@juno.com
SnailMail - CBA *** Phone - 716.494.1239

"My Night Light runs more power than my Rig!!!"

Date: Wed, 4 Jun 1997 14:19:42 -0700
From: gsurrency@juno.com (Gary L Surrency)
To: adams@chuck.dallas.sgi.com
Cc: qrp-l@Lehigh.EDU
Subject: [20825] Re: CW Bandwidth (the analysis continues)
Message-ID: <19970604.141943.9846.3.gsurrency@juno.com>

Chuck Adams writes:
-snipped-
>When you build a rig, kit, or whatever, take a scope and look at
>the keyed output, please. Make sure it is clean. I don't know about
>anyone else but I cringe when I see the CW scope and key closure
>waveforms on high dollar rigs in QST.
-snipped-

Boy, is Chuck ever correct about this! I can't believe the crummy CW waveforms and slow startup times of SOME of the IcomYaesuKenwood stuff!

In contrast, the CW envelope of the QRP kits I have is near perfect. Of course, the 38S has very "hard" keying, but the QSK is great! How good is the envelope of the QRP+ ? I've never seen one, but some sound good and some sound "hard". What's the story? And who has the best QSK radio with proper rise/fall times?

72,

Gary Surrency AB7MY
QRP-L #571 Chandler, AZ (near Phoenix)Grid Square DM43BH

Az ScQRPions

Date: Wed, 4 Jun 1997 17:41:39 PST
From: wb2vuo@juno.com (William K Hibbert)
To: qrp-l@lehigh.edu
Subject: [20826] Re: 24-hour Clock
Message-ID: <19970604.174144.4567.3.wb2vuo@juno.com>

A couple of weeks ago, I stopped off at "Parts America" and auto prts chain (part of Western Auto), and they had several 24-hourr format clocks, with digits from 3/8-inch to 2-inches high, priced from $8 - $15.

I am sure that most auto parts chains, and also most big department stores will also have the Stick-to-the-dash clock like these.

Check it out.

72/73, Keith, WB2VUO, QRP-L #582, scQRP 40, 100% QRP
Tech Specialist (ARRL/WNY), ARRL Life Member,
Trustee, NQ2RP/B 10 Mtr QRP Beacon (4 Watts @ 28.2870 MHz)
"In the Depths of the Great Bergen (NY) Swamp...FN13ac"
Packet - wb2vuo@w2im.#wny.ny.usa.noam *** Email - wb2vuo@juno.com
SnailMail - CBA *** Phone - 716.494.1239

"My Night Light runs more power than my Rig!!!"

Date: Wed, 4 Jun 1997 14:57:00 -0500
From: Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
To: qrp-l@Lehigh.EDU (Receipt Notification Requested)
Subject: [20827] 24 hr clocks so far
Message-ID: <M1935385.002.9us31.1.970604220715Z.CC-MAIL*/OU=LMPCC4/OU=ILBB/PRMD=MOT/ADMD=MOT/C=US/@MHS>

This must be a real hot button for others, too. In just a couple of hours, I've had 8 replies already.

I hope a few more of you will drop in with info on your best sources for a good 24 hour clock for the shack.

I will summarize the inputs in a day or so, once the inputs taper off.

I'd like to see some more ideas, though, 'cause there must be a lot of sources out there we just don't know about.

Please keep them cards and letters comin'
Thanks and 73, Bob N6WG

Date: Wed, 4 Jun 1997 17:02:01 CST
From: wj5o@juno.com
To: QRP-L@Lehigh.EDU
Subject: [20828] 24 hour clocks/with back-up
Message-ID: <19970604.170125.3870.7.WJ5O@juno.com>

I've been following the thread-----I got both of mine at Radio Shack
Micronta cat # 63-753B 5/8 green numerials 24 hr with 9V Bat back-up
Micronta cat#63-761 Time & calender 24 hr Battery operated
I bought both for less than $20.00 each---the first one was on sale not too long ago 14.95 I think!
73 Bill

Date: Wed, 4 Jun 1997 18:25:44 -0400 (EDT)
From: N4JS <jsielke@pobox.com>
To: Gary L Surrency <gsurrency@juno.com>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [20829] Re: CW Bandwidth (the analysis continues)
Message-ID: <Pine.LNX.3.95.970604182155.6354A-100000@jsielke.ppp.cyberenet.net>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Wed, 4 Jun 1997, Gary L Surrency wrote:

> In contrast, the CW envelope of the QRP kits I have is near perfect. Of
> course, the 38S has very "hard" keying, but the QSK is great! How good is
> the envelope of the QRP+ ? I've never seen one, but some sound good and
> some sound "hard". What's the story? And who has the best QSK radio with
> proper rise/fall times?
I think the prize among the commercial rigs would have to go to TenTec, hands down. My QRP+ has good, though somewhat "soft" keying. You are right, the kits are terrific! The OHR400 looks like a textbook example of what's right! My HW9 is "fair." I haven't really looked at the GM17 or the ARK4. (shame on me). Oh yes, the Sierra. Also looks almost perfect, except on 15 meters. I think I have a tiny bit of instability there.

```
 _  _  _ _      _  ___   John L. Sielke n4js@amsat.org n4js@pobox.com
| \| || | |  _ | |/ __|  n4js@n4js.ampr.org  NJ Grid:FM29LN
| .` ||_  _|| || |\__ \       http://www.qsl.net/n4js
|_|\_|  |_|  \__/ |___/  NJ-QRP #57  QRP-L #884  QRP-ARCI #9328
NE-QRP #507 G-QRP #9544  NorCal #1989  QCWA  FISTS #2781
```

Date: Wed, 4 Jun 1997 18:29:43 -0400 (EDT)
From: N4JS <jsielke@pobox.com>
To: qrp-l@lehigh.edu
Subject: [20830] Looking at CW
Message-ID: <Pine.LNX.3.95.970604182644.6363A-100000@jsielke.ppp.cyberenet.net>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Incidentally, for those of you whose eye isn't that great. Set up your
Video Camera to take a "movie" of your scope, while keying rig under test.
You can play it back at slow speed, freeze it, etc. (Only works on QRP
rigs, others wipe out video camera, at least mine)


```
 _  _  _ _      _  ___   John L. Sielke n4js@amsat.org n4js@pobox.com
| \| || | |  _ | |/ __|  n4js@n4js.ampr.org  NJ Grid:FM29LN
| .` ||_  _|| || |\__ \       http://www.qsl.net/n4js
|_|\_|  |_|  \__/ |___/  NJ-QRP #57  QRP-L #884  QRP-ARCI #9328
NE-QRP #507 G-QRP #9544  NorCal #1989  QCWA  FISTS #2781
```

Date: Wed, 04 Jun 1997 18:40:32 -0400
From: Richard Sherman <srichard@aldus.northnet.org>
To: qrp-l@Lehigh.EDU
Subject: [20831] NNY hamfest
Message-ID: <3.0.1.32.19970604184032.006a959c@aldus.northnet.org>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Just curious if anyone on the list will be going to the Champlain Valley
ARC hamfest in Plattsburgh, NY this Saturday, June 7. It'd be a nice time
to meet some fellow QRP'ers and as a bonus Atlantic Division Director Kay
Craigie WT3P will be there. You can bug her about some things that have
been discussed here before. Please let me know if you might be able to make

it. This is the 2nd year of the 'fest so attendance may be a little light.
Hope to see some of you there.

72 de Rick WZ2T   NNY
srichard@northnet.org

srichard@northnet.org
   ---If you're not part of the solution,
            You're part of the precipitate.---
                  Steven Wright

Date: Wed, 4 Jun 1997 18:46:43 PST
From: wb2vuo@juno.com (William K Hibbert)
To: qrp-l@Lehigh.EDU
Subject: [20832] FS: Unassembled 38S
Message-ID: <19970604.184650.4655.0.wb2vuo@juno.com>

OK. I'm sure that EVERYONE is going to jump on this, so in accordance
with the thread about fairness, I will draw a name out of a hat on this...

Unassembled 38S, with the IRF-511 for the 5-watt mod - $35 shipped

Drop me a line here...

72/73, Keith, WB2VUO, QRP-L #582, scQRP 40, 100% QRP
Tech Specialist (ARRL/WNY), ARRL Life Member,
Trustee, NQ2RP/B 10 Mtr QRP Beacon (4 Watts @ 28.2870 MHz)
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"My Night Light runs more power than my Rig!!!"

End of QRP-L Digest 747
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